MARCH, 1959

RHODE ISLAND Medical Journal

Free Choice of Physician and Closed Panel Systems . . . What is Your Opinion?

See page 175

Volume XLII, No. 3

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"...high-potency progestational agents [such as NORLUTIN] frequently have the power, when administered in adequate dosage, to arrest and suspend myometrial contractions incident to spontaneous abortion."* This is the conclusion of a group of investigators who studied patients with threatened (and in some cases habitual) abortion. The study group was compared with a control group which was treated with bed rest and mild sedation only. In this control group, the salvage rate was 15.5 per cent. In the group receiving NORLUTIN, 19 of 45 pregnancies were continued—a salvage rate of 42.2 per cent

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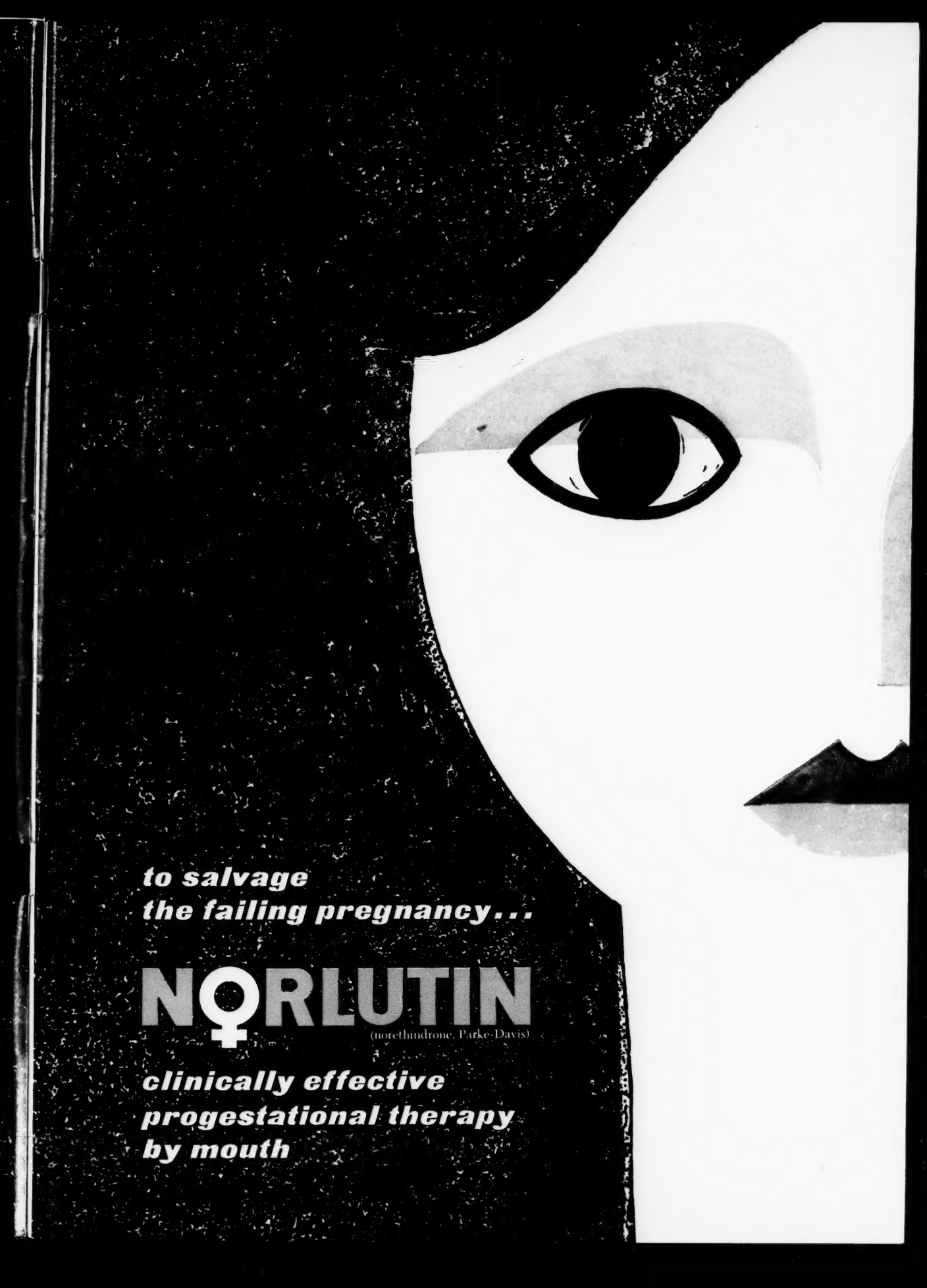
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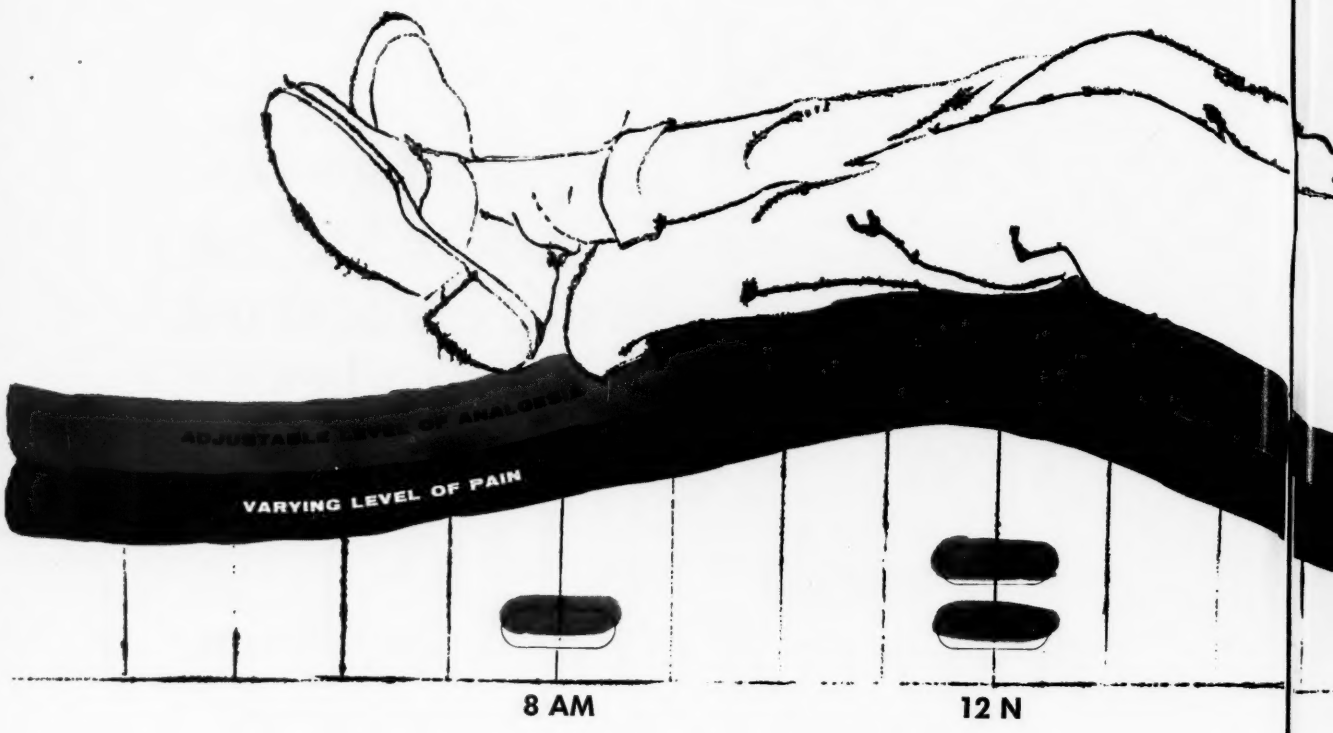

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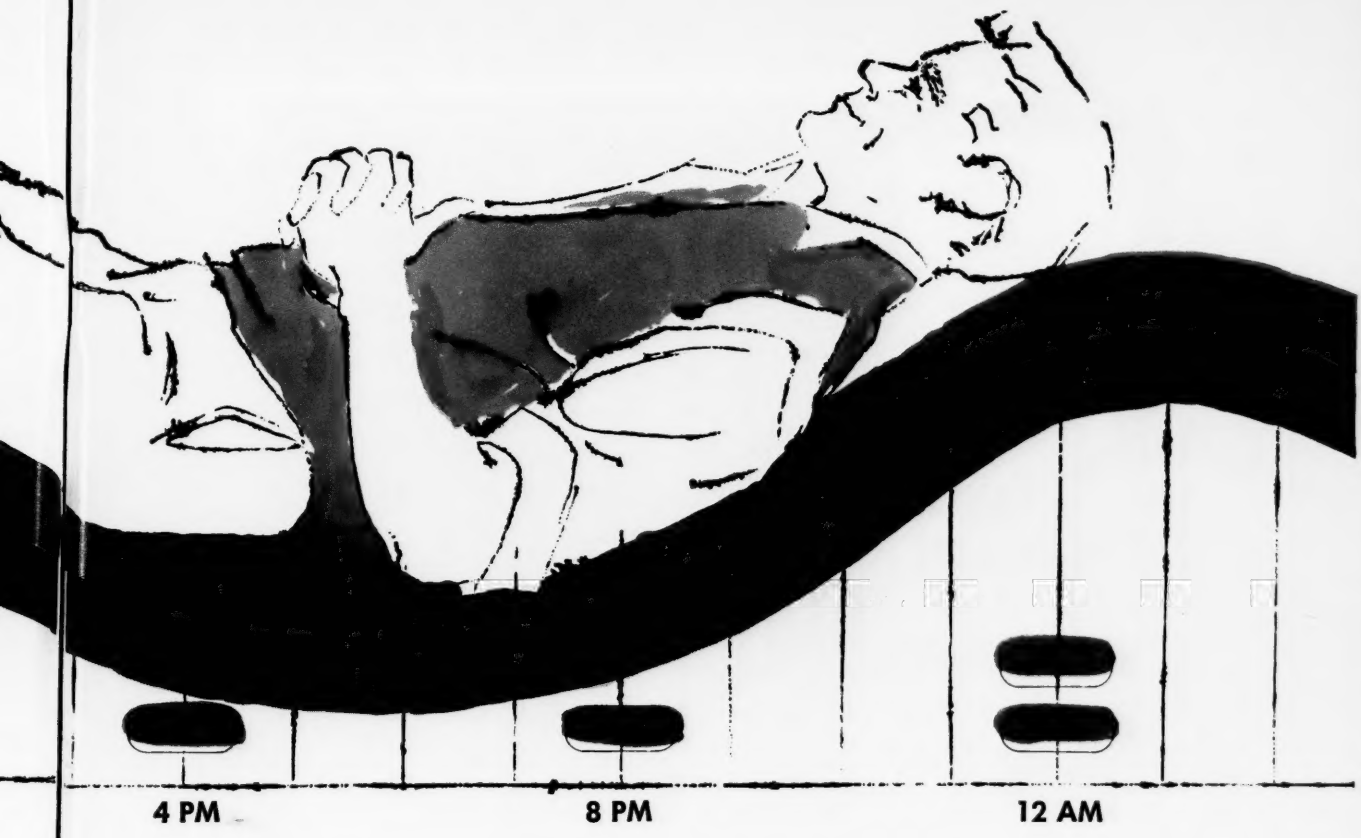

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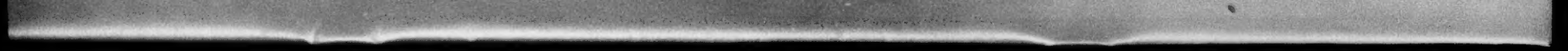

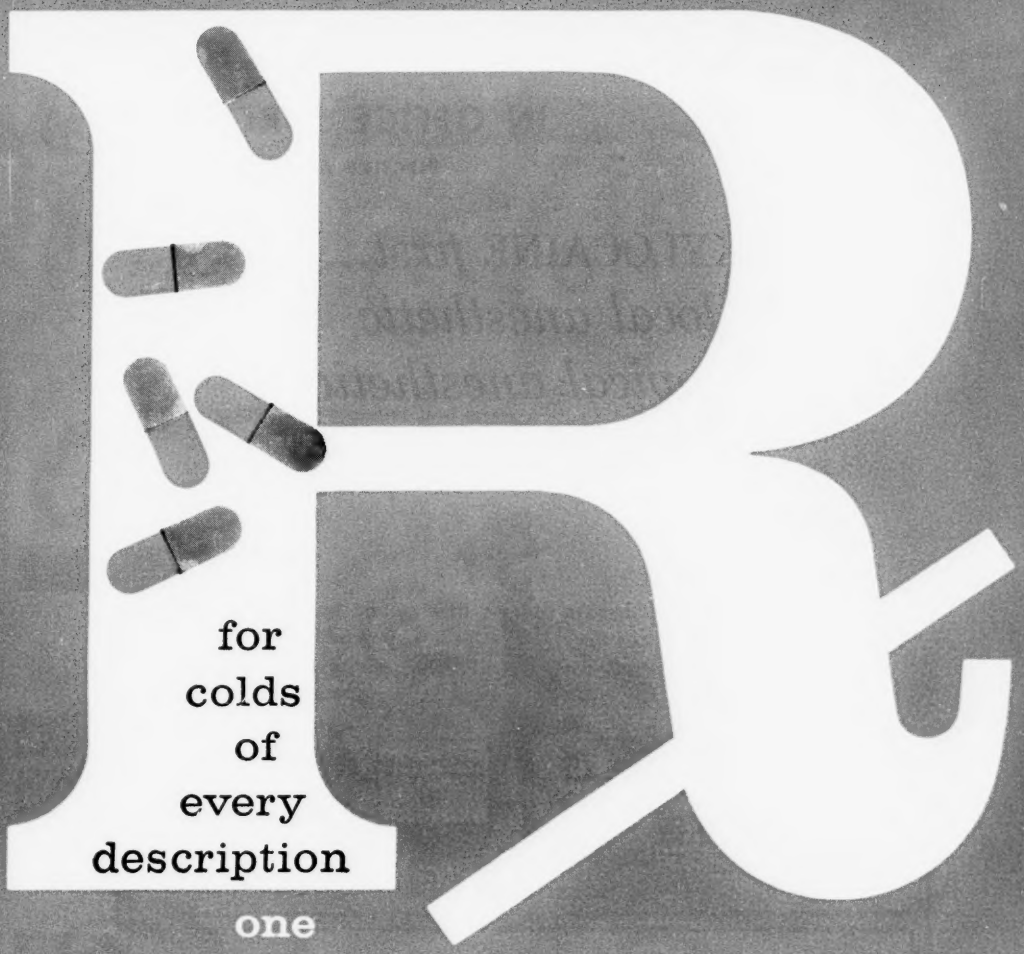

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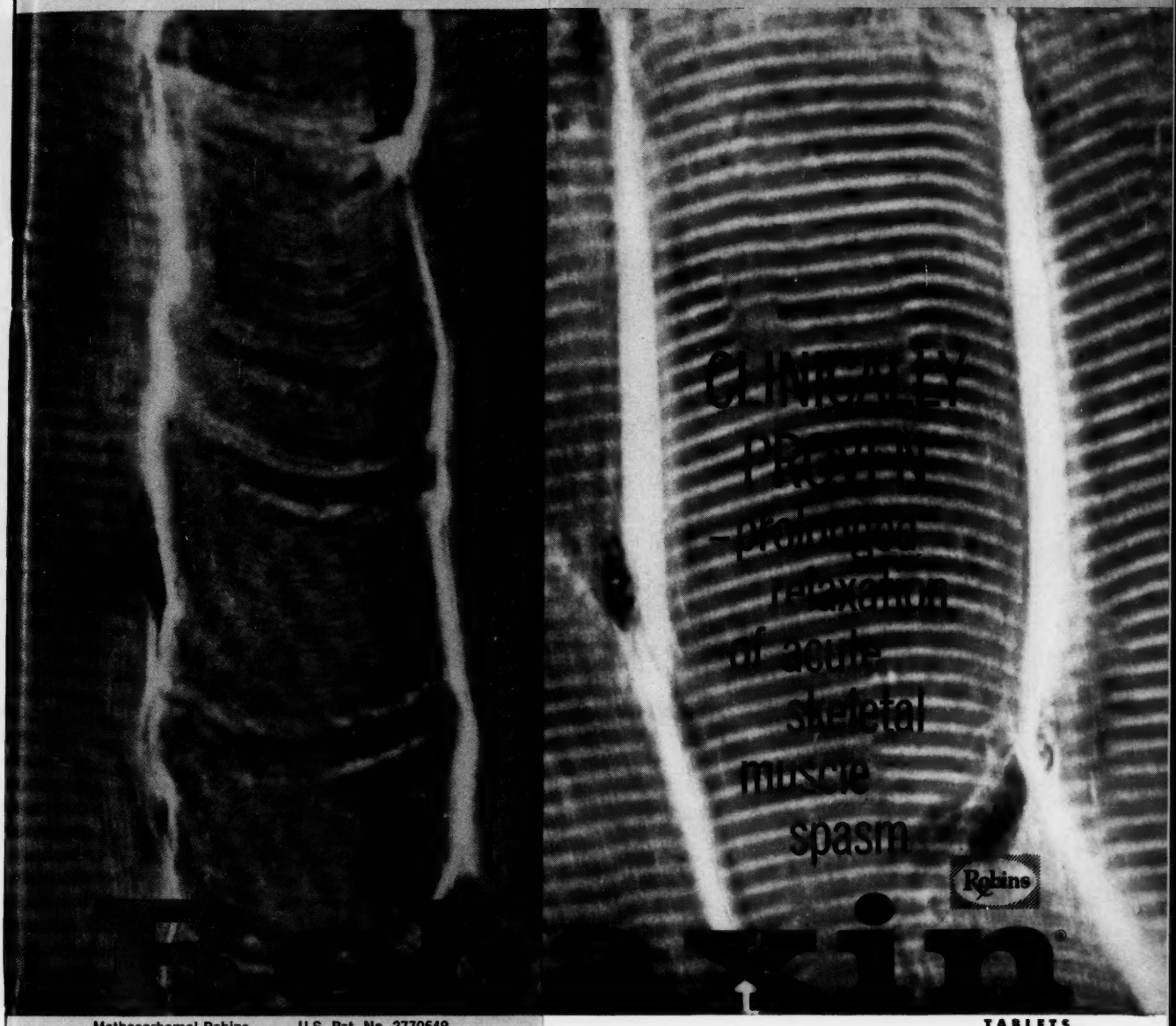

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		"marked"	moderate	slight	none
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		"pronounced"			
Forsyth[2]	58	37	20	—	1
		"good"			
Lewis[3]	38	25	6	—	7
O'Doherty &		"excellent"			
Shields[4]	17	14	2	1	0
		"significant"			
Park[5]	30	27	—	2	1
		"gratifying"			
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REFERENCES: 1. Carpenter, E. B.: Southern M. J. 51:627, 1958. 2. Forsyth, H. F.: J.A.M.A. 167:163, 1958. 3. Lewis, W. B.: California Med. 90:26, 1959. 4. O'Doherty, D. S., and Shields, C. D.: J.A.M.A. 167:160, 1958. 5. Park, H. W.: J.A.M.A. 167:168, 1958. 6. Plumb, C. S.: Journal-Lancet 78:531, 1958.

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1. Landes, R. P. and Peters, M.: Postgrad. Med. 23:648, June 1958.

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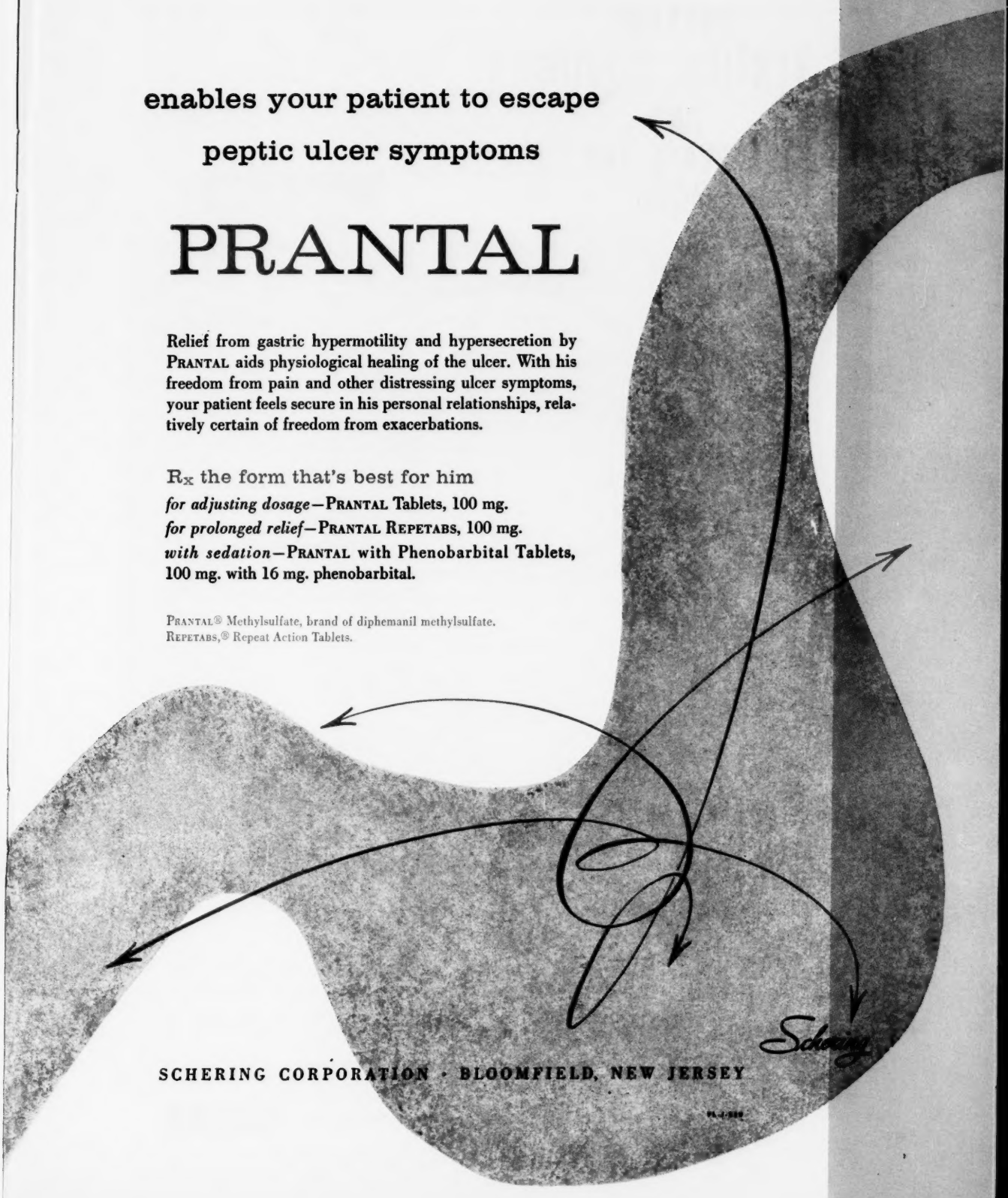

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The RHODE ISLAND MEDICAL JOURNAL

VOL. XLII MARCH, 1959 NO. 3

SOME ERRORS IN THE DIAGNOSIS OF GASTROINTESTINAL NEOPLASMS*

O. M. JANKELSON, M.D.

The Author. *O. M. Jankelson, M.D., of Boston, Massachusetts. Assisting Physician, I and III (Tufts) Medical Services, Boston City Hospital, and the Department of Medicine, Tufts University School of Medicine.*

A NEGATIVE APPROACH to diagnosis, based on a discussion of errors, can serve to place the various diagnostic modalities in proper perspective. Although it may appear to emphasize limitations in diagnosis, such an analysis should allow a critical evaluation of the use of diagnostic aids. Because of the limitations of space some arbitrary exclusions must be made and the following will not be discussed: errors in the differential diagnosis of gastric "ulcer-cancer"; failures in the diagnosis of pancreatic tumors, since the diagnosis is difficult, largely unsupportable by laboratory tests, and made primarily by diagnostic awareness; and mistakes in the differentiation of malignancy and benignancy in such tumors as polyps, since the diagnosis is dependent on microscopic examination and clinically these tumors must be considered malignant until proven otherwise. There remains a considerable number of diagnostic errors, both of omission and of commission.

Errors of Omission

Errors of omission (Table I) are consummated by both patients and physicians. The problem of patient delay in presenting himself for medical attention has received considerable attention.[1] A wide dissemination of information has been advocated to reduce this factor. Its prospective value is doubtful, as indicated by the insignificant reduction in delay encountered when physicians are patients.[2]

Physicians' failures, primarily a lack of appreciation of signs and symptoms that can serve as clues to otherwise occult gastrointestinal cancer (Table II), are also a source of delay. The significance of these omens is greater in, but not limited to, patients over forty years of age. The appearance of these symptoms necessitates full investigation until a diagnosis has been established. Symptomatic therapy, even if temporarily effective, is not a substitute.

An *unexplained change in digestive pattern* is an early and frequent symptom of gastrointestinal cancer. In meticulous histories of patients with gastric carcinoma there is an interval of vague complaints, such as abdominal fullness, "gas," indigestion, and loss of appetite, occurring prior to the appearance of more diagnostic symptoms.[3] Similar symptoms have been noted with neoplasms of the cecum and ascending colon,[4] emphasizing the importance of complete investigation of the entire gastrointestinal tract. Unfortunately, the diagnostic quality of these symptoms is somewhat reduced by their occurrence in functional disorders. Nevertheless, their significance must not be underestimated.

The importance of *alterations in bowel habits* as an early warning of colonic cancer has been frequently emphasized. The alterations, consisting of constipation, diarrhea, or both alternating, are almost universal with tumors of the left side of the colon. *Intestinal obstruction*, especially partial, can be included under this heading. The recent appearance of abdominal cramps, fullness, and distention preceding defecation occurs often as the initial

TABLE I
Errors of Omission
Patient Delay
Physicians' Failure

TABLE II
Clues to Gastrointestinal Neoplasms
Unexplained changes in digestive pattern
Unexplained alterations in bowel habits
Unexplained intestinal obstruction
Unexplained gastrointestinal hemorrhage
Unexplained fever
Unexplained anemia

continued on next page

*Delivered in part at the Teaching Program on Cancer for invited general practitioners, at Rhode Island Hospital, Providence, Rhode Island, October 26, 1958.

From I and III (Tufts) Medical Services and the Gastrointestinal Clinic, Boston City Hospital and the Department of Medicine, Tufts University School of Medicine.

symptom of colonic cancer. In the more dramatic episodes of intestinal obstruction, such as intussusception, polypoid tumors may be the leading point or precipitating factor.

The diagnosis of cancer is almost established when these alterations in bowel function are accompanied by *gastrointestinal hemorrhage*. It may be well, especially in older patients, to consider all instances of gastrointestinal bleeding as due to cancer until proven otherwise. With cancer bleeding is most often microscopic in amount, demonstrable only by chemical tests. On occasion it may be gross, rarely even massive. Gross bleeding may occur as the passage of changed or unchanged blood in the vomitus—indicating a lesion proximal to the ligament of Treitz; as changed blood in the stool, characteristically a tarry black, partially formed stool—indicative of a lesion proximal to the cecum; or as bright red blood per rectum—occurring with lesions anywhere in the gastrointestinal tract.[5]

Unexplained fever has received inadequate attention as a clue to gastrointestinal cancer. It is seen frequently in patients in whom the diagnosis has been established and may occur prior to this event.[6] It is most marked in the presence of extensive ulceration,[6] especially with gastric tumors.[7] It is not specific for gastrointestinal tumors and is best known with the lymphoma-leukemia group of diseases[8] and hypernephromas.[9]

Of all these clues *unexplained anemia* is of the highest significance. The investigation of a patient with unexplained anemia must include examination of the stools for evidence of occult blood, digital rectal and sigmoidoscopic examinations, plus radiographic investigation of the gastrointestinal tract with particular reference to the cecum and ascending colon.

Case I

A sixty-seven-year-old female was referred for barium enema. She had been seen elsewhere eight months before and a microcytic anemia had been discovered. Extensive investigation had been directed toward the blood and blood forming organs, the thyroid, and the genitourinary tract without revealing the source of the blood loss. Eight months after the discovery of the anemia a barium enema was performed (Figure 1): three discrete tumors were visualized. At laparotomy the three tumors plus hepatic metastases were found.

The failure to perform an adequate physical examination, including digital rectal, is also a significant error of omission. The importance of the rectal examination is indicated by the occurrence of 70% of all colonic cancers within the reach of the examining finger.[10] Sigmoidoscopy has also been advocated as part of the physical examination, a 10% incidence of polyps on routine sigmoidoscopies has been reported. When the examinations were repeated on a yearly basis the incidence increased to 20%.[11] But when disease is suspected sigmoidoscopy is as essential as roentgen examination. It allows, with minimal patient discomfort, full visualization plus the opportunity of biopsy over the lower 25 centimeters of the colon. Seventy-five per cent of all colonic cancers occur within this area.[10]

Another form of physician error is the failure to allow for the possibility that cancer coexists with other disease. A pre-existing diagnosis may be relied upon as the explanation of all developments and an opportunity to discover a concomitant neoplasm will be lost. Because diverticulosis and cancer of the colon occur largely in the same age groups these two diseases are often coexistent.

Case II

An eighty-year-old male was seen in the Out-Patient Department of the Boston City Hospital with the complaint of diarrhea. Episodes had occurred previously three and four months before. All three had appeared to respond promptly to mild constipating agents. A barium enemia had shown diverticuli of the colon. Repeat X ray of the colon at this time revealed numerous diverticuli in the distal colon with isolated areas of spasm and mucosal alterations, consistent with diverticulitis. However, there was also a constant and irregular filling defect of the cecum (Figure 2).

Errors of Commission

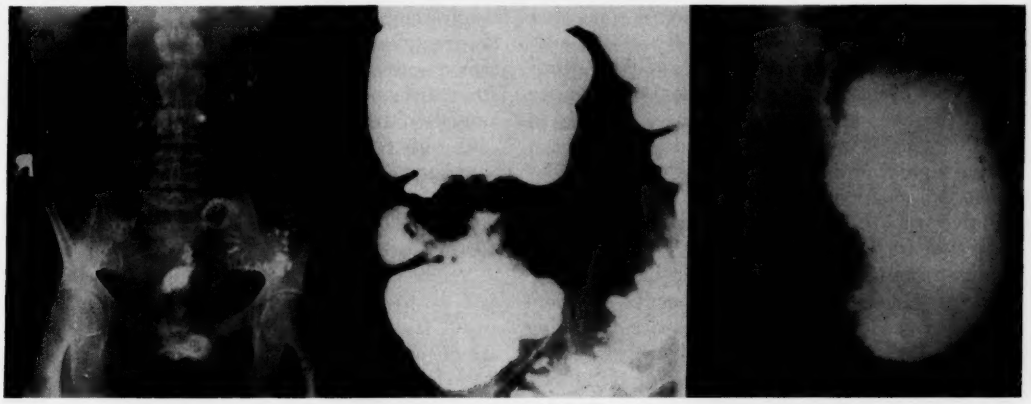
The errors of commission (Table III) are due to the inherent limitations of the diagnostic tools used in the investigation of the gastrointestinal tract. They are either a failure to demonstrate a lesion—a "false negative"—or an erroneous diagnosis of a non-existent lesion—a "false positive." The prime responsibility for these errors, however, resides not with the method but with the interpretation.

X ray is the chief investigative tool for examination of the gastrointestinal tract. It is widely available, but not uncomfortable or hazardous for the patient, and under suitable conditions is highly informative. Adequate preparation of the patient is essential and in its absence the information obtained may be insufficient for diagnostic purposes.

TABLE III

Errors of Commission

X ray
Gastroscopy
Cytology



FIGURES 1, 2, 3

Case I. Barium enema (air contrast study) with three tumors (arrows).
Case II. Sigmoid colon with diverticuli on right, cecum with filling defect on left.
Case III. Distended stomach evidencing pyloric obstruction.

Case III

A fifty-one-year-old female had had a cholecystectomy eleven months previously. At that time palpation of the stomach by the surgeon had failed to reveal any abnormalities. At this time she complained of symptoms of pyloric obstruction of short duration. Upper gastrointestinal examination was performed after evacuation of the stomach content through an Ewald tube. The stomach was distended, atonic, and considerable residue was present (Figure 3). Although the clinical picture had suggested the possibility of neoplastic disease the diagnosis could not be confirmed by this examination. At laparotomy a malignant tumor of the distal stomach was found.

Even under the best of circumstances roentgen examination of the stomach may fail to demonstrate about 10% of all cancers.[12] The incidence of these "false negatives" is higher when the lesion is located in the proximal third of the stomach, where neither palpation nor pressure techniques can be utilized.[13]

"False positive" reports also occur, but statistics on their incidence are limited.[14] The list of diseases misdiagnosed as cancer is long and includes inflammatory and granulomatous diseases, amyloidosis, varices, and pressure from adjacent organs. Organic diseases are not the only offending conditions, retained food or blood can cause confusion.

Case IV

A sixty-eight-year-old male was admitted to the Boston City Hospital with complaints of loss of appetite and weight. Physical examination was noncontributory. By barium meal a polypoid filling defect in the mid-portion of the stomach was seen (Figure 4). At laparotomy the stomach was normal by palpation and inspection through a gastrotomy. Retrospective analysis indicated that the patient had eaten just prior to X ray.

Blood clots in the stomach may also be a source of confusion. Roentgenologists are properly reluctant to place undue emphasis on polypoid defects in the face of known upper gastrointestinal hemorrhage. However, a lesion may be obscured by the clots and a "false negative" occur.

Case V

A fifty-four-year-old male, a chronic alcoholic, entered the hospital with signs and symptoms of acute anemia. On gastric aspiration fresh blood was obtained. X-ray examination revealed multiple defects which were interpreted as blood clots (Figure 5). Repeat examination was performed after the bleeding had stopped and a large polypoid tumor was seen. At operation the diagnosis was confirmed.

continued on next page

FIGURE 4

Case IV. Polypoid filling defects in the body of the stomach.

In the colon roentgen examination is somewhat more accurate and "false negative" reports are estimated at about five per cent.[15] Most of these occur either with lesions in the rectosigmoid or cecum or in the presence of coexistent disease. Failures to visualize a lesion in the rectosigmoid will be of least clinical significance if digital rectal and sigmoidoscopic examinations are properly utilized. "False negative" reports due to inadequate visualization of the cecum are of greater import. Without filling of the cecum, as demonstrated by regurgitant flow into the terminal ileum or filling the appendix, a barium enema is considered incomplete. A space occupying lesion in the cecum, which need not obstruct the fecal stream, may produce the identical appearance. Such a lesion may in some instances be more easily visualized by filling the terminal ileum and cecum from above by barium by mouth.

"False negatives" also occur when other diseases, notably diverticulitis (Cf. Case II) and chronic ulcerative colitis, confuse the picture. In the presence of both diseases the diagnosis of cancer is difficult, since the symptoms may be indistinguishable and by X ray preceding colonic deformities — spasm or obstruction in diverticulitis, polypoid degeneration or cicatrization in colitis—may mask or mimic neoplastic changes. In chronic ulcerative colitis, furthermore, alterations in exfoliated cells often resemble those of cancer.[16]

The problem of "false positive" reports on barium enema examinations is of less importance because of their relative infrequency. As in the examination of the stomach the errors are largely due to the confusion produced by other diseases.

Case VI

A sixty-three-year-old female was admitted to the hospital because of the passage of bright red blood per rectum. Abdominal cramps had preceded bowel movements but were not a prominent complaint. A barium enema revealed a narrowing in the descending colon (Figure 6). In thirteen days the area of narrowing was longer and the constriction was more pronounced (Figure 7). The constricted segment was resected. On microscopic examination there was hypertrophy of smooth muscle cells with foreign body giant cells, interpreted as a variant of segmental colitis. In the succeeding three years there have been no recurrent symptoms and repeat barium enemas have failed to reveal any further pathology.

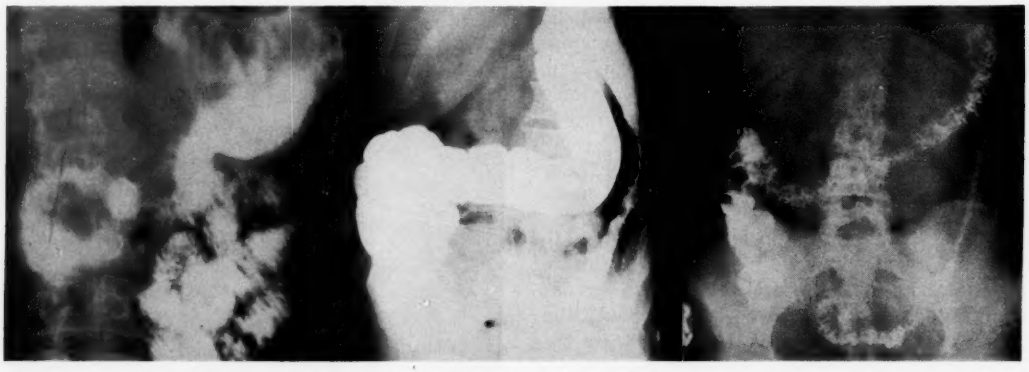
Segmental colitis may be confused both clinically and by roentgen examination with cancer of the colon. It is characterized by a short course, during which bleeding and obstructive symptoms predominate. Evidence of acute inflammation, as in the usual forms of ulcerative colitis, is absent or inconspicuous. The treatment of choice appears to be resection with end-to-end anastamosis; the recurrence rate is probably very low.[17]

Gastroscopy is primarily of value in obtaining further information when the X-ray reports are inconclusive. It may also allow correction of an error in the X-ray diagnosis. It has been most successful when gastritis, especially in the antrum,[18] has simulated malignancy on upper gastrointestinal series.[19]

However, there are inherent limitations to gastroscopy. Patient co-operation and a patent esophagus are essential. Some areas of the stomach are inaccessible and retained secretions, food, or blood may obscure the mucosa also and allow "false negatives" to occur.

Case VII

A seventy-four-year-old male was admitted to the hospital with an inadequate history due to language difficulties. His presenting complaint was hematemesis. Physical examination was noncontributory. On upper gastrointestinal series the fundic area was thought to be suspicious but no definite diagnosis was made. On gastroscopy a nodular mass was seen in this area but the mucosa



FIGURES 5, 6, 7

Case V. Multiple filling defects in fundus of stomach.
Case VI. Area of narrowing in descending colon.
Case VII. Increase in area of involvement in thirteen days.

was obscured by oozing blood. A presumptive diagnosis of cancer was made. At operation the mass was found to be gastric varices associated with advanced cirrhosis of the liver.

Even with adequate visualization errors of interpretation on the part of the gastroscopist may occur.

Case VIII

A fifty-seven-year-old male was admitted with indeterminate symptoms and signs of a profound anemia. Stools were consistently positive for occult blood. Gastroscopy was performed when the roentgenologist failed to discover a source of the bleeding. On the posterior wall of the stomach there was an area of erosions with mucosal irregularity and rigidity of the wall, suggesting malignancy. In the succeeding year this diagnosis was not confirmed by the clinical course, repeat X rays and gastroscopy, and exfoliative cytology.

Cytologic examination of exfoliated gastric cells by the Papanicolau technique has attained a high degree of reliability, approaching that reported with vaginal and bronchial secretions. However, the acidity of the gastric contents necessitates great care in order to obtain adequate and well-preserved specimens. With such careful technic a correct cytologic diagnosis has been made in 84 per cent of cases of gastric cancer.[20] The significance of a positive report is emphasized by the occasional discovery of hitherto unsuspected gastric carcinoma.[20, 21]

However, "false negative" reports are not infrequent. In addition, the occasional "false positive" imposes limitations on the reliability.

Case IX

A seventy-three-year-old male was first seen in the Out-Patient Department with the complaint of constipation. Because of a story of post-prandial distress and easy satiation an upper gastrointestinal series was performed. There was diminished peristaltic activity and the possibility of linitis plastica was suggested. Exfoliated gastric cells were interpreted as positive for malignancy by several observers. An exploratory laparotomy was performed and no abnormalities in the stomach were found. A biopsy was interpreted as chronic gastritis. The individual cells throughout the biopsy were strikingly similar to the exfoliated cells.

SUMMARY AND CONCLUSIONS

In certain instances difficulties and mistakes are encountered in the diagnosis of gastrointestinal cancer. Evaluation of each patient individually by all available diagnostic tools may reduce the frequency of these errors. The final responsibility for diagnosis cannot be delegated to the roentgenologist, the gastroscopist, or the cytologist but must rest upon the referring physician. When the diagnosis remains doubtful after evaluation and correlation of the reports, one or all of the tests may be repeated until inconsistent findings are reduced to a diagnostic pattern. In some instances the final diagnostic tool, exploratory laparotomy with microscopic examination of the resected specimen, may be required.

* * *

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THE PHARMACOLOGICAL REVOLUTION*

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IN SPEAKING on such a topic as *The Pharmacological Revolution,* I hesitate a bit over whether to address you as fellow beneficiaries or fellow sufferers. I suspect that most of you are both. For, although I am sure that all of you have been active participants in this revolution, and that all of you have reaped tremendous benefits from the resulting advances in drug therapy, I am also sure that most of you have complained bitterly at one time or another about some of the problems that such advances seem always to create.

I also wonder whether "revolution" is the most suitable word to describe these advances. For what we now call our "modern" approach to pharmaceuticals and to drug therapy is actually the culmination of events that began as far back as the time of Ehrlich and the "Magic Bullet."

Yet it is also true that, as recently as the time when most of us were still studying pharmacology and materia medica in medical school, there was an appalling lack of specific drugs. At my medical school, for example, I was told that there were two specifics: quinine, for malaria, was one; and morphine, for almost everything else, was the other. Of course, there were the heavy metals, and arsenicals for syphilis, but few specific means of therapy for treating the disease by attacking the causative organism.

In a sense the revolution really began with the sulfonamides, which opened up the field of antibacterial agents and brought specific therapy into focus. Almost incidental were the observations that led to the discovery of penicillin, thus starting a revolution which gave us modern "magic bullets" never conceived of before.

But the real revolution, as I conceive of the term —a conscious, directed effort to develop specific drugs to combat specific diseases or to fill specific needs—began with the antimalarial program started during World War II. This program, which developed as a result of a need to do something about malaria, resulted in the development or synthesis of more than 20,000 compounds in an attempt to find the ultimate antimalarial. The results of this concerted effort have been amazing; but, although effective drugs have already been developed, there are still problems to be solved.

For example, the most active antimalarial developed thus far, pyrimethamine (Daraprim), is almost fantastically potent. It will effectively suppress malaria if administered in 8/10 mg. doses once a week. However, good as this drug is, it is not yet good enough. Unfortunately, many malaria victims cannot be reached for treatment this often. What is needed is a depot antimalarial which is equally effective, but which is so stable *in vivo* and is retained so tenaciously in the tissues that a treatment every six months or even once a year will be effective. Such a drug would be a big step towards wiping out malaria all over the world.

The reason for this is interesting. Quinine and other antimalarial drugs will destroy the blood form of the disease organism; however, the tissue form, which brings about relapses, is harder to kill. Since mosquitoes became infected from the blood of malaria victims, a drug that would destroy the blood organism for as long as six months or more, coupled with the mosquito's short life span, would eliminate the disease by eliminating the infected mosquitoes.

An interesting question might be raised at this point: If we were able to go so far toward the truly effective antimalarial in such a short time through this concerted effort, why did we put up with relatively ineffective treatment for so long before doing anything about it? I think that the answer is this: when forced, we can always advance far more rapidly than we think.

Another revolution presently in progress is the chemotherapeutic attack on cancer. And although the results thus far have not been so spectacular, as in the case of malaria, great progress is being made.

Four years ago, acting upon the advice of leading scientists aware of the interesting possibilities of modifying tumor growth by drugs, the Congress set up the Cancer Chemotherapy Program. This program is carried on at the National Chemotherapy Service Center under the administration of the National Cancer Institute.

*Delivered at the 112th Annual Meeting of the Providence Medical Association, at Providence, Rhode Island, January 5, 1959.

Recruiting its advisory groups from the pharmaceutical industry, from medical practice, and from cancer research groups all over the country, the Service Center has now set up the necessary machinery for screening from 40,000 to 50,000 compounds per year by testing them against three tumors occurring in mice. If the compound tested produces modifications in these tumors, the green light is given for further testing.

Many of these compounds come from rather unusual supply depots. One such depot is the shelves of college chemistry laboratories, which contain a fantastic number of compounds synthesized by chemistry students as part of their graduate work. These compounds had never been tested, and nobody knew what they might be good for. A similar source is laboratories of our pharmaceutical houses, whose shelves also contain hundreds of compounds synthesized as by-products of other programs. But while these houses felt that the compounds were good for *something,* they felt that the cancer therapy field was still too experimental and risky to justify investing the necessary funds for the complete testing process—a process which might cost $500,000 for a complete run-down on one compound.

However, the 40,000-50,000 compounds I spoke of earlier do not get this full treatment. Because only about one out of a thousand of these compounds demonstrates effective tumor-damaging power, only forty or fifty of the thousands tested thus far have shown enough promise to merit further studies leading towards clinical trial.

Another supply source, however, shows more promise. This is the antibiotic "beers" or "soups" from which streptomycin and certain other antibiotics are isolated. These beers contain products of bacterial growth which have shown effective tumor-damaging power. But even more important is the fact that about one in a hundred of these "beers" shows promise, as opposed to the one in a thousand ratio for drugs from the shelves. And oddly enough, the compounds extracted from antibiotic beers of the Japanese pharmaceutical industry show a higher degree of tumor-damaging power than those of the United States.

At present about 100 "beers" have shown enough promise to merit isolating the active principle as a preliminary to clinical trial in man, but how soon this particular revolution will come to its desired conclusion—the conquest of cancer—can only be guessed. It is surprising how often in the course of a logical, methodical attack on a disease problem, the real means of victory comes in through the back door, as did penicillin during the attack on syphilis. However, I suspect that victory over cancer will not be achieved in this backdoor manner, for we are dealing not with a single disease entity but with a whole series of them. It will take long planned thoughtful work, but there are logical grounds for the belief that cancer will be conquered in the not-too-distant future.

The third revolution that I wish to discuss—one in which I participate a little more directly and thus find the most fascinating—is that taking place in the heart disease field.

Some years ago, Doctor Irvine Page, a physician interested in the chemistry of the brain, somehow got sidetracked into the study of hypertension. In seeking the cause of high blood pressure, he isolated and later crystallized a vasoconstrictor substance which he called serotonin.

Because he had isolated this substance by processing literally gallons of pig's blood, it was naturally assumed that serotonin did its work in the bloodstream by vasoconstriction of the blood vessels. However, when the compound had been crystallized and its chemical formula characterized, it was found that serotonin was identical with Enteramine, isolated in impure form from the gastrointestinal tract by the Italian physiologist Erspamer. A little later it was discovered that serotonin occurred widely in nature, not only in the blood of mammals, but in the skins of toads and in certain toadstools.

This wide distribution of serotonin led quite naturally to the supposition that it had a biological significance far out of proportion to that indicated by its rarity in the bloodstream. Since the serotonin in the blood is trapped entirely in the platelets, it probably has little vasomotor constrictive action. Workers at the Heart Institute have found that stripping the platelets of serotonin has no effect upon the bleeding time or the clotting power of the blood.

Although the largest quantities of serotonin are found in the intestinal mucosa, where it may play an important role in peristalsis, it is also found to occur in high concentrations in the subcortical regions of the brain, especially the hypothalamus. Here, together with norepinephrine, it may be involved in neuronal systems that regulate those behavior mechanisms which can function without conscious control.

The functions of serotonin and norepinephrine in the brain are best understood against the framework of the concepts of Doctor W. R. Hess. About thirty years ago, Hess pointed out that the central autonomic nervous system does not operate independently, but is functionally integrated with the rest of the brain to maintain body integrity. He studied the nature of this integration by electrically stimulating various subcortical brain areas in unanesthetized cats. From the observed behavioral patterns, he postulated that physiologic responses to environmental changes are controlled by a subcortical system which co-ordinates autonomic, so-

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matic, and psychic functions. He further postulated that this subcortical system consists of separate and antagonistic divisions, ergotrophic and trophotrophic, which are normally in a state of dynamic balance.

The ergotrophic integrates sympathetic with somatomotor activities to produce behavioral patterns which prepare the organism for positive action: arousal, enhanced skeletal muscle tone and locomotor activity, elevation of blood pressure, increased sensitivity to sensory stimuli, hyperthermia, and others. NHI workers have implicated norepinephrine as the neurohormone of this integrative mechanism.

The opposing system, the trophotrophic, integrates parasympathetic with somatomotor activities to produce behavioral patterns which are recuperative or protective in nature: drowsiness and sleep, decreased skeletal muscle tone and locomotor activity, lowering of blood pressure, decreased sensitivity to sensory stimuli, hypotension, and others. NHI workers have implicated serotonin as the neurohormone of this integrative mechanism.

The development of these conceptions by NHI workers has clarified the actions of drugs which influence brain function, many of which interact with serotonin or norepinephrine receptor sites.

One of these drugs, reserpine, was isolated when medical interest was revived in an old drug of the Indian pharmacopeia, Rauwolfia, whose beneficial effects in cases of hypertension and excited mental states seemed almost unbelievable. Perhaps the reason that it had been passed up was that we had been thinking for so long in terms of a specific drug for a specific effect that we completely ignored a drug whose effects were so varied.

In fact, reserpine elicits a bewildering array of apparently unrelated effects, but these are no longer unrelated when they are recognized as being identical to those of trophotrophic predominance. In other words, reserpine stimulates one of the giant divisions of the subcortical integrating mechanism.

We now know that Rauwolfia compounds such as reserpine owe their effectiveness to their ability to release serotonin from its "bound" state in the brain to a "free" state. It does this by blocking the ability of the brain cells to store serotonin while not interfering with its synthesis. The blocking or destruction of these storage sites also explains the finding that, even though all measurable amounts of reserpine have vanished from the brains of rabbits within two to four hours, the tranquilizing effects persist for forty-eight hours. It is this effect on brain serotonin which accounts for the tranquilizing effects of reserpine. However, it has also been found that reserpine administered in doses that barely affect brain serotonin depletes norepinephrine stores at the peripheral nerve endings. This "chemical sympathectomy" is important, since sympathetic nerve impulses cannot influence effector organs when no neurohormone is available at the peripheral nerve endings. Since the hypotensive effects of reserpine are primarily due to this ability to liberate peripheral norepinephrine, non-sedative doses are effective in the treatment of hypertension.

But sometimes this drug gets out of hand, producing extreme and dangerous depression. For this reason, Heart Institute workers have collaborated with industry in the study of a reserpine analog which releases norepinephrine peripherally, but does not release serotonin centrally. This compound is proving of value as a non-sedative hypotensive agent.

A drug that has the same general effects as reserpine, but which acts in a totally different way, is chlorpromazine. Chlorpromazine releases neither serotonin nor norepinephrine, but achieves the same effect as reserpine, not by stimulating the trophotrophic, but by depressing the opposing trophotrophic through the inhibition of the action of norepinephrine. This difference in mode of action may be illustrated with dopa, a precursor of norepinephrine which enters the brain and forms dopamine and norepinephrine. The stimulatory and increased sympathetic effects induced by dopa are dramatically blocked by chlorpromazine, but not by reserpine.

Lysergic acid diethylyamine (LSD) is a drug of interest to those of us who have long believed that it is high time we were learning more about the chemistry of the brain instead of worrying about behavioral symptoms. A chemist working with LSD in Switzerland discovered that he suffered mental disturbances similar in a number of respects to those of the schizoid syndrome whenever he was exposed to this chemical in the laboratory. It was at first proposed that LSD produced its effects by antagonizing the action of serotonin at its active sites. However, it is now believed that LSD, mescaline, amphetamine, and other phenylethylamine congeners of norepinephrine mimic the action of norepinephrine in the brain and stimulate the ergotrophic system. In accordance with this view, these compounds elicit a wide variety of symptoms identical with those of ergotrophic predominance. Thus LSD and other ergotrophic agents stimulate the same system in the brain that chlorpromazine depresses, which accounts for the fact that LSD and chlorpromazine give virtually opposite responses.

The fact that LSD and other compounds which simulate the action of norepinephrine in the brain can produce effects akin to certain forms of mental illness might lead to the conclusion that mental illness is due to an unbalance in brain norepinephrine and serotonin. However, I feel that this would be an oversimplification. It must be remembered that

these affect only the lower part of the brain stem and not those higher centers of the thought processes, judgment, discrimination, and the like.

Since excessive amounts of serotonin and norepinephrine can have potent effects, there is, as might be expected, an enzyme that promptly destroys the free amines released at nerve endings. It is very important that this enzyme, monoamine oxidase, be present to prevent our being over-stimulated or over-depressed. Recent research on drugs which inhibit this enzyme, however, is leading to the development of drugs which might be useful against hypertension, angina pectoris, epilepsy, and mental illness.

The story of the monoamine oxidase inhibitors is a fascinating one. One of the first of these compounds was iproniazid, developed originally as a therapeutic for tuberculosis. However, when the drug was tested on patients in TB hospitals, it was found to excite them too much and its use had to be discontinued. But other workers found iproniazid very effective in certain types of depressed patients in mental hospitals. Studies have shown that iproniazid elevates brain levels of serotonin and norepinephrine, and incomplete studies suggest that the stimulating effects of this drug may be due to an increase in brain epinephrine. In any case, from this action came the rather peculiar term "psychic energizer."

A recent, more powerful monoamine oxidase inhibitor was JB 516 (1-phenyl-2-hydrazinopropane), synthesized by Doctor John Biel of Lakeside Laboratories. Workers at the Heart Institute became interested in this drug in connection with studies on hypertension as well as other effects of JB 516.

JB 516 has been found to lower blood pressure in hypertensive patients without producing some of the undesirable side effects of ganglionic blocking agents, e.g., constipation, dry mouth, mydriasis, and sexual impotence. Animal studies have also proved JB 516 effective in blocking the convulsions produced by electric shock or metrazol. These studies suggest that JB 516 may be effective against the convulsions of epilepsy, and may be a lead in finding the causes of this disease.

One of the side effects of JB 516, however, is one of the strangest and most fascinating of them all. Color blindness has always been used as one of the classic examples of a purely hereditary trait. However, it has been found that a number of patients receiving high chronic doses of JB 516 may develop red and green color blindness. This side effect vanishes when the therapy is discontinued.

This would suggest that the vistas opened up by the study of the chemistry of the brain are even vaster than we had believed. Just where this trail that we are now following toward a better understanding of how our minds, our brains, and our senses work might ultimately lead, I can only guess. But I can assure you that it will be an exciting trail to follow.

Discussion

(Following his address, Doctor Watt answered the following questions:)

Q. I am red and green color blind. Is the work you have just discussed likely to give us some insight into the physiology and psychology of color blindness?

A. I don't know about that, but the possibilities are certainly intriguing. The fact that JB 516 can produce color blindness may indicate that color blindness might be due to a change in the chemistry of the visual system—a change that might be modifiable in the right direction by another drug. For example, we know that the sickle cell trait is due to one misplaced amino acid in a very complex protein. An analogous chemical change may account for color blindness.

Q. We know that both chlorpromazine and Rauwolfia administered in large doses may produce pseudo-Parkinsonism. Do we have any understanding of the chemistry by which this occurs?

A. We may be dealing with something like this. Acetylcholine is a neurohormone of the parasympathetic system which transmits impulses across the peripheral nerve endings when present in normal amounts. However, excessive amounts of this neurohormone depolarize the membranes of the nerve cells and block these impulses.

The same may be true with serotonin. For example, low doses of 5-hydroxytryptophan, a serotonin precursor analogous to dopa in the case of norepinephrine, result in increased "free" serotonin and sedative effects. However, higher doses elicit signs of excitement. This reversal of effects is believed to be due to a blockade of the normal effects of serotonin by the high concentration of the free amine. Of course, Parkinsonism itself is a complex of things, and I am not sure that these drugs produce all the symptomatic effects.

Q. You stated that chlorpromazine blocks the sympathetic effect. Are there other drugs besides the monoamine oxidase inhibitors that increase the sympathetic effect?

A. Ritalin (methylphenidylacetate) and Meratran (pipradol) are two drugs analogous to LSD which exert a central action on the sympathetic system. Both have been effective in treating depressed patients.

Q. May I ask about the poisonous mushroom investigations carried out by Watson?

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GLUCOSAMINE-POTENTIATED TETRACYCLINE IN PEDIATRICS

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THE ABILITY *of glucosamine* (2-amino-D-glucose) to potentiate absorption of tetracycline from the gastrointestinal tract was first demonstrated in 1958 by Carlozzi, who showed that "a combination of tetracycline plus glucosamine gave the highest antimicrobial levels of the four (tetracycline) preparations tested, being followed in order by tetracycline plus citric acid, tetracycline plus sodium hexametaphosphate, and tetracycline phosphate complex."[1] Further confirmation of the increase in serum levels of tetracycline activity by glucosamine was presented in studies conducted at the Division of Antibiotics of the Food and Drug Administration,[2] as well as in studies by Snell and his colleagues employing radioactive isotopes.[3,4]

In clinical studies, the tetracycline-glucosamine combination has been found to exhibit a wide range of antimicrobial activity comparable to unpotentiated tetracycline, oxytetracycline, or chlortetracycline. Reports indicate, however, that glucosamine-potentiated tetracycline is more rapidly absorbed than unpotentiated tetracycline, and that it produces higher serum levels which are satisfactorily maintained with the usual clinical dosages.[5-9] Equally as important, particularly in treating children, the tetracycline-glucosamine combination appears to be well-tolerated.

It is especially important that a drug used in pediatric practice should not cause gastrointestinal upsets. The variations in anatomic, physiologic, pathologic, and immunologic patterns that produce different clinical manifestations of disease in children than in adults, may also cause differences in type or extent of response or untoward effects to therapy. For example, diarrhea which often is a minor side effect of oral antibiotic therapy in adults can be a major side effect in children. Physiologically, the relatively greater nutritional needs of infants increase the impact of gastrointestinal upsets. The infant with a diarrheal disturbance is in a more precarious position than the adult because of the greater rapidity with which he develops severe states of anhydremia and acid-base disturbances.[10]

In a report on the use of glucosamine-potentiated tetracycline in the treatment of upper respiratory infections in 50 children, Nathan[7] noted that the preparation was extremely well-tolerated. "Side effects were mild and transitory. The infrequent occurrence of loose stools in eleven patients did not necessitate interruption of therapy."[7] Nathan's finding is supported by the results of this investigation of the clinical effect and incidence and severity of side effects in infants and children of the tetracycline-glucosamine preparation.

Materials and Methods

In all, 150 children between one month and fourteen years' old were treated in the office, the home or on the ward for various infections including tonsillitis, bronchitis, pharyngitis, bronchopneumonia, and otitis media (table). Fifteen children were patients at the Rhode Island State Infirmary for chronic mentally ill children, thirty-one were inpatients at St. Joseph's Hospital, Providence, Rhode Island, and the remaining 104 children were treated in office and house calls in private practice.

Tetracycline with glucosamine was administered either in capsules (125 or 250 mg. of tetracycline per capsule), oral suspension (125 mg./tsp.), or pediatric drops (5 mg./drop).* The average daily dose was 25 mg./kg. of body weight administered in divided doses. The tetracycline-glucosamine preparation was administered while the patient was febrile and for three or more days after the patient was afebrile.

Patient responses to therapy were classed as "excellent" if the child had a major clinical improvement and had become afebrile within 72 hours. Responses were classed as "good" if clinical improvement was slower and the patient had become afebrile within 120 hours. Lesser responses were classed as "fair." A "poor" classification was given if the patient failed to respond or if side effects

*Cosa-Tetracyn Capsules, Cosa-Tetracyn Oral Suspension, Cosa-Tetracyn Pediatric Drops (orange-flavored), Pfizer Laboratories, Brooklyn, New York.

occurred regardless of the patient's clinical improvement.

Results

The clinical responses to the glucosamine-potentiated tetracycline were uniformly satisfactory. In some instances they were markedly superior to previous results with penicillin, erythromycin, or other antibiotic agents.

Eighty patients (53.4% of the group) had excellent responses — 20 becoming afebrile within 24 hours. Thirty-four patients (22.6%) had good responses becoming afebrile within 120 hours. Twenty-two patients had fair responses requiring 6 to 10 days of therapy before they became afebrile. No patient failed to respond to therapy and no patient developed side effects.

Case Histories

Patient 1, a twenty-five-month-old boy, institutionalized for severe mental retardation resulting from porencephalic cyst, received antibiotic therapy for an acute upper respiratory infection with cough and temperature of 103.4 degrees of two days' duration. Before therapy, nose and throat cultures and X rays were negative. His leukocyte count was 26,400 and hemoglobin 99 per cent. His weight was 19½ pounds. At the age of 1 day, he had had a large portion of his bowel removed. As a result, he customarily had two to three large, loose bowel movements a day.

The child was placed on the tetracycline-glucosamine preparation, 125 mg. every six hours. His temperature was normal in 24 hours, however, he was continued on therapy for seven days. On the second day of therapy he had six instead of three loose movements. No change was made in the regimen, and his bowel movements returned to pretreatment amounts. After one week of therapy, the child's final leukocyte count was 8,100, hemoglobin 88%, and weight 19¾ pounds.

Patient 2, an eleven-month-old boy with cerebral atrophy was treated for rhinitis and for multiple boils on his face, trunk, and extremities. He was not acutely ill, but he had failed to respond to therapy with penicillin. Laboratory studies showed a leukocyte count of 12,000 (neutrophils 43%, lymphocytes 39%, monocytes 15%, eosinophils 3%) and hemoglobin 12.0 Gm./100 ml. His weight was 17.3 pounds. Nose and throat cultures showed the major pathogenic organism to be a coagulase-positive hemolytic micrococcus pyogenes aureus. The organism was susceptible to novobiocin, erythromycin, oleandomycin, bacitracin, chlortetracycline, tetracycline, and oxytetracycline. It was not susceptible to penicillin. Although the test showed the organism to be susceptible to erythromycin, the patient did not respond to a course of therapy with that antibiotic.

The child was placed on 125 mg. of glucosamine-potentiated tetracycline every four hours. His rhinitis subsided within 24 hours and his boils subsided in six days. The medication was continued for 13 days without side effects.

Patient 3, a twelve-year-old girl with cerebral agenesis, was shown by X-ray examination to have bronchopneumonia in the left lower lobe. Initial throat cultures revealed a hemolytic streptococcus to be the predominant organism. Her leukocyte count was 10,700 (neutrophils 72%, lymphocytes 22%, monocytes 6%) and her temperature 101.8 degrees.

Therapy with penicillin was unsuccessful. Erythromycin therapy also failed to produce a favorable response. The tetracycline-glucosamine preparation was administered as an oral suspension, 1½ tsp. (200 mg.) every six hours. The patient was afebrile after four days and well in seven days. She showed no side effects.

Discussion

About 75 per cent of the medical care of children and about one third of the general practitioner's time is devoted to pediatrics,[10] and in no other part of the physician's work is the old adage "an ounce of prevention is worth a pound of cure," so applicable.[10] The use of chemotherapeutic agents for prophylaxis of infections should be undertaken judiciously and with a knowledge of potential hazards. The agent or combination of agents should be selected on the basis of the potential infection under attack.[11] Naturally, antibiotic support should not be withheld in severe infections until bacteriologic studies have been completed.

In this evaluation, particularly among the hospitalized mentally retarded children, the tetracycline-glucosamine preparation was administered under difficult conditions. The infections encountered were, in most instances, highly contagious and the patients were in constant contact with each other. Under such conditions, sore throats, boils and other infections can sweep through an infirmary. Nevertheless, therapy was quite successful in preventing the spread of infection. With the appropriate use of the tetracycline-glucosamine preparation we were able to keep cross-infections and the incidence of infection at the infirmary at a bare, almost irreducible minimum.

It must be noted, however, that despite the usefulness of the preparation in returning the children to a noninfectious state, throat cultures obtained following the completion of therapy revealed a persistence of micrococcal organisms. Perhaps the organisms in these instances were nonpathogenic; but they nevertheless persisted and one could not say that the tetracycline preparation actively decreased micrococci.

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The results of this study do show, however, that a busy general practitioner can use the tetracycline-glucosamine preparation in patients with febrile respiratory illness and expect to render a cure in two to five days in over 85% of the patients.

The lack of gastrointestinal distress, and particularly of diarrhea, as a side-effect of therapy with tetracycline-glucosamine combination may be due to the presence of the glucosamine. Sauvage[12] has reported that glucosamine may well alter the course of diarrhea in infants and children. In a controlled study, Sauvage found "that the response and return to an afebrile, asymptomatic state was prompt with those patients (with diarrhea) on glucosamine as compared with those not receiving the amino sugar. The average duration of diarrhea for the group on glucosamine was 34 hours and for the group not receiving glucosamine, 78 hours."[12] The dosage of glucosamine used, however, (3 Gm. every 6 hours) was considerably larger than that contained in the tetracycline-glucosamine preparation (25 mg./kg. of body weight daily).

SUMMARY AND CONCLUSION

A total of 150 patients aged one month to fourteen years were treated with glucosamine-potentiated tetracycline for various pediatric infections. Eighty of the children became afebrile within 72 hours and all but 22 within five days. All of the children responded to therapy within 10 days. There were no side effects to therapy. The glucosamine-tetracycline preparation showed a prompt antibacterial action and a broad range of antibacterial effectiveness with a remarkably low degree of toxicity.

INDICATIONS FOR THERAPY WITH GLUCOSAMINE-POTENTIATED TETRACYCLINE

Indication	Number of Cases*
Tonsilitis	60
Bronchitis	25
Pharyngitis	23
Bronchopneumonia	12
Otitis media	12
Upper respiratory diseases	19
Miscellaneous infections including: gastroenteritis, encephalitis, boils, gingivostomatitis, roseola, abscess, cellulitis, pyelitis, and others	28

*29 patients had multiple infections.

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THE PHARMACOLOGICAL REVOLUTION

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A. One of the drugs that have been obtained from mushrooms is bufotenine (n-methyl serotonin), an analog of serotonin having somewhat the same kind of effect. There are a number of colloidal substances in mushrooms which have not been fully investigated, and within a year there may be more to add to bufotenine. Natural products versus chemical syntheses make an interesting competition. The screening problems encountered in synthesizing compounds are somewhat offset by the problems of isolating and purifying the natural product.

Q. Some of these drugs which you have discussed are being widely used for the treatment of depressed states. Do you consider them actually dangerous? Are you afraid of them?

A. Yes, I am. Or perhaps it would be better to say that I have a healthy respect for all of them. In the old days, we could afford a shotgun approach to drug therapy because we were dealing with crude extracts and impure mixtures whose effects were relatively impotent. However, as we approach closer and closer to these purified substances, their potency increases. This places an increased responsibility upon the physician, who must, with much greater precision, know his patient. The very ability to hit a target hard means that we must be sure that we have chosen the correct target. Increasingly, we cannot afford to say, "Let's try this drug. It may do some good and it will not do any harm." I feel that most potent drugs almost surely do harm, and thus there should be a positive reason for using them.

FREE CHOICE OF PHYSICIAN AND CLOSED PANEL SYSTEMS

Abstracted from the Report of the Commission on Medical Care Plans of the American Medical Association

At the Clinical Session of the A.M.A. held in Minneapolis last December, the report of the Commission on Medical Care Plans was considered. The report was received without discussion and act was deferred until the June, 1959, meeting of the House of Delegates at Atlantic City. The House, however, voted to ask the Constituent Associations to review the report and transmit their decisions with regard to the following basic points:

1. ***Free Choice of Physician***
Acknowledging the importance of free choice of physician, is this concept to be considered a fundamental principle, incontrovertible, unalterable, and essential to good medical care without qualification?

2. ***Closed Panel Systems***
What is or will be your attitude regarding physician participation in those systems of medical care which restrict free choice of physician?

Below are reprinted sections of the report relating to these two basic issues, together with conclusions of the Committee. Every member of the Rhode Island Medical Society should read these presentations (the entire report is available at the Medical Library) and make known his views to the delegates of his district to the Rhode Island Medical Society.

III. FREE CHOICE OF PHYSICIAN

THE MEDICAL PROFESSION exists to serve the physical and mental needs of all humanity. The tools of the physicians are life-long study, intelligent use of scientific equipment, and dedicated service.

The medical profession also has long had the objective of rendering good medical care at a cost the people can afford to pay.

There are many factors in the attainment of this goal. One of these is the freedom of choice of physician which has been, and still is, a fundamental principle of medical practice.

The twentieth century has seen basic freedoms of mankind restricted or even abolished in many lands. The physicians of the United States believe that it is their duty to preserve fundamental freedoms to prevent the deterioration of medical care which has resulted in many areas because of restrictions on the forms of medical practice.†

"Freedom of choice" means the right of the individual to exercise, without restraint, selection among alternatives. Furthermore, as applied to medical care, an individual should have the right to select a physician of his choice. The medical profession subscribes to, supports, and strives to attain complete acceptance and application of this principle of "freedom of choice."

The medical profession is aware, however, that the principle has been restricted in its application in some situations. Among such instances are the following: by action of law; by social and economic changes leading to new methods of financing the cost of medical care; by action of the profession in establishing systems of staff appointments granting limited privileges; by the rating of physicians for the performance of various types of medical care; by the certification of specialists; by action of hospitals as recognized in the 1947 Report of the Judicial Council which, in part, stated that,

> In order that a high standard of service be maintained, hospitals may limit somewhat the number of physicians who deliver medical services in their institutions and even assign a physician to certain definite fields in accordance with his training and experience.

Another example is the reaffirmation by the House of Delegates in December, 1957 of the 1927 Report of the Judicial Council which stated that a contract would be considered unfair and unethical,

> . . . when a *reasonable degree* of free choice of physician is denied those cared for in a community where other competent physicians are readily available. . . . (Emphasis added.)

In December, 1955 the House of Delegates adopted the following in its statement on "Medical Relations in Workmen's Compensation."

> Disabled employees should have the right to accept physicians' services provided by employers, or to select another attending physician from a register of all other physicians in the community willing and *qualified* to perform the essential service. (Emphasis added.)

Other examples of apparent conflict between principle and its application are the following: Chapter I, Section 2, page 5 of the Principles of

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†Dr. Price comments: To balance the statement, I should like to point out that the twentieth century has also been marked by new freedoms, new opportunities for social and scientific experimentation, improved social status, and better living standards. This is particularly true with regard to medical care made available through vast funds resulting from collective bargaining which seeks to secure more medical care for large industrial groups.

Medical Ethics of the A.M.A. (December, 1955) which is contained in the "Guides for Evaluation of Management and Union Health Centers" states, in part, that, "Physicians . . . must dispense the benefits of their special attainments in medicine to all who need them." Elsewhere, however, in the Principles of Medical Ethics (Section 5) it is stated that, ". . . a physician may choose whom he will serve"—in which case the patient may be denied his choice. In upholding the concept of "free choice of physician" it has been stated that,

> Every physician duly licensed by the state to practice medicine and surgery should be assumed at the outset to be competent in the field in which he claims to be, unless considered otherwise by his peers. (*Suggested Guides to Relationships between State and County Medical Societies and the United Mine Workers of America Welfare and Retirement Fund*, adopted by the House of Delegates, December 1957.)

The latter statement has led to controversy since physicians in a community may be reluctant to state frankly their opinion as to another's qualifications and yet the judgment of concerned physicians elsewhere might not be acceptable.

These historical developments have acknowledged that choice of physician is for some people not free in the literal sense of the word. Nevertheless, numerous resolutions adopted by the House of Delegates have continued to reiterate the conviction that "free choice of physician" by the patient is essential to the provision of medical care of good quality. Some have been confused because they have failed to distinguish between acceptance of the principle and restrictions on its application. The foregoing statements of policy are the result of earnest efforts to resolve conflicts between the idealism which is an important element in making the practice of medicine a profession and the practicalities of this modern social and economic era. As citizens, physicians have the obligation to resist trends which they believe are detrimental to the best interests of society. As physicians, our additional function is to provide care of good quality to people at a cost they can afford. Since free choice of physician has been denied in some mechanisms for the provision of medical care, it is incumbent upon the profession to understand the reasons for this action and to be aware of its effects upon the quality of medical care.

In the closed-panel, direct service, type of plan visited, the committee has uniformly observed care of good quality being made available to patients who do not have "free choice of physician" in the literal sense of the term. This is possible when sponsors of these plans have accepted their obligation to see that plan physicians are well qualified. Financial arrangements exist which make possible the prediction and budgeting for the cost of providing service. Based on its observations, the committee finds that the absence of "free choice of physician" does not necessarily result in inferior care; but the committee in no way intends to state that good quality medical care was rendered in these plans because of the absence of free choice.††

The committee has noted a trend toward offering the individual employee more than one plan for medical care so that he may exercise his choice. The committee believes that this development is commendable. It indicates that proponents of some closed panel plans have come to recognize the desirability of a wider choice of physician by the patient.

"Free choice of physician" is an important factor in the provision of good medical care. In order that the principle of "free choice of physician" be maintained and be fully implemented the medical profession must discharge more vigorously its self-imposed responsibility for assuring the competency of physicians' services and their provision at a cost which people can afford.

Attention is called to Section 4 of the Principles of Medical Ethics, adopted June, 1957 which states,

> The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.†††

In summary, the medical profession is determined to maintain the highest possible standards of medical care. Freedom of choice is an important factor in the achievement of this goal.

††Dr. Leo Price comments: The last part of this sentence is gratuitous. In my opinion, this is not the issue. It tends to divert attention from the fundamental issue, which is the provision of good quality medical care despite the presence of social or economic barriers. Good quality medical care can be provided by physicians, regardless of the framework within which medicine is practiced. The physician who has a deep interest in humanity often makes great personal sacrifices to live up to the Hippocratic Oath to provide care to the sick and needy. Such dedication is most likely to be nurtured in an atmosphere where freedom to practice medicine without interference is guaranteed — regardless of whether "open" or "closed" panels are involved.

†††Dr. James R. Reuling comments: "Free choice" must always stand as a principle, and we should never give up fighting for principles. However, it is going to become only a hollow phrase unless the county societies throughout this country vigorously, and without fear or favor, clean their own house in accordance with Section 4 of the Principles of Medical Ethics.

Be at the Annual Meeting

May 12 and 13

Rhode Island Medical Society

IV. THIRD PARTY RELATIONSHIPS IN MISCELLANEOUS AND UNCLASSIFIED PLANS

THIS SECTION is concerned with the relationships which should exist among plan members, and physicians, and the many types of medical care plans, particularly closed panel plans, which the committee has studied.

As Part II of the Commission's report discloses, the medical profession has dealt for many years with various organizations which assist individuals in paying for medical care or which arrange for the provision of medical care. Due to many social, economic, and legal factors the number of, and enrollment in, these organizations has increased. They are often referred to as third parties, and are here defined as mechanisms which, for any reason, enter into the relationship between the patient and his physician. Such an all-inclusive definition is necessary because third parties assume such a wide variety of forms and activities.

Among the third parties are the Miscellaneous and Unclassified plans studied by the committee. Any consideration of the relationships that should exist among these plans, and patients, and physicians, must be predicated on recognition of the following:

1. Some of these mechanisms have been associated with medical practice for many years.
2. Many of them are likely to remain in the field of medical care and become increasingly important to patients and physicians.
3. In many states closed panel plans can be legally organized and operated as a result of legislation and court decisions.
4. The development and operation of these plans have been encouraged, in part, as the outcome of collective bargaining between unions and employers.
5. Many of these programs are claimed to be an economic necessity for many persons whom they serve.
6. The stated objectives of these plans are the arrangement for payment and/or the provision of a greater amount of good medical care at a cost that can be afforded.

Problems have arisen between these plans and the medical profession. Some of them have been resolved but others have persisted and new problems continue to arise.

Many third party mechanisms in the group of Miscellaneous and Unclassified plans have interfered with free choice of physician by establishing closed panels of physicians. Some of them have caused adverse physician reaction by adopting a method of compensation other than the usual fee for service. Some of the plans have established their own professional standards which limit the activities of plan physicians and exclude some physicians from participating in the plan. A great many physicians believe that the development of closed panel plans is a threat to private practice. Some physicians object to these plans because they change the traditional form of medical practice. Some physicians contend that many of these plans, through administrators, or governing boards, or both, interfere with the patient-physician relationship; some, that plan members cannot secure good quality medical care, and some, that closed panel practice has the potential to affect adversely the quality of medical care. It is contended that the personal freedom in the practice of medicine might be adversely affected if all physicians should ultimately be obliged to associate themselves with these plans in order to practice medicine. It is contended by many physicians that some of these plans utilize promotional methods and exercise such absolute economic controls as to create a monopolistic effect.†

These contentions have been subjects of controversy between segments of the medical profession and various plans. Notwithstanding these disputes, other physicians appear to be satisfied with their relationships with a closed panel type of practice as well as with other types of third party mechanisms.

In order to resolve existing disputes and to avoid conflict, there are certain basic concepts which should guide the relationships among plan members, and physicians, and these plans. The recognition of these concepts would provide a basis for mutual understanding and co-operation and aid in the achievement of a mutual objective of both the medical profession and these third parties—the provision of good medical care at a cost which can be afforded. The most important of these concepts, relating to plan members, physicians, and these plans, are set forth below.

PLAN MEMBERS

Medical care of good quality should be available to plan members at a cost which will not be a deter-

†Dr. Leo Price comments: Monopoly in any form can only be objectionable if it possesses characteristics which are inimical to the best interests of society. This is true regardless of whether management, labor, a professional society, or any other organized body promotes it. The reference to "monopolistic effect" might therefore be equally applicable to Blue Shield Plans in those states which have passed special enabling legislation to give this organization the sole legal authority to offer prepaid medical care to the public.

continued on next page

rent to the procurement of such care. They should be routinely informed of the amounts of the contributions of the employer and employee which are expended for such services. Mechanisms should be established to hear and resolve complaints of patients concerning the plan of which they are members. Patients should have the widest possible choice of physicians from among those serving in a closed panel or from among other physicians in the community who are willing and competent to render the service. In the latter instance, it is essential that there be 1) a mutually acceptable determination of fees which a closed panel can pay and the willingness of physicians to provide services for those fees, and 2) the assurance of competency as set forth in subsequent paragraphs and in Section III on "Free Choice of Physician."

Plan members should become familiar with the scope of services afforded by a plan to the end that they will be used reasonably and effectively.

PHYSICIANS

Physicians are entitled to practice medicine without lay interference in decisions on predominantly professional matters. Those affiliated with plans should have working conditions and remuneration which will assure the provision of good medical care. They may accept remuneration from any plan on any basis which is not in violation of the Principles of Medical Ethics. The medical profession may reasonably expect that plans should and will cooperate with it in seeking consultation and guidance in the attainment of good medical care.

Physicians who provide services under the plan should render competent medical care to members of plans at a cost which will not be a deterrent to the procurement of good medical care. They should use reasonable efforts to prevent unnecessary utilization of plan services and facilities. The medical profession has a dual responsibility of assuring the competence of its members and of disciplining them when evidence of incompetence or abuse of plan benefits are present. Physicians have the obligation of offering guidance and consultation to third parties to improve the quality of medical care, and of maintaining active liaison mechanisms to resolve problems and controversies which may arise.

THE THIRD PARTY IN MISCELLANEOUS AND UNCLASSIFIED PLANS

Under proper legal authority, these third parties are privileged to develop medical care plans. They may reasonably expect that competent medical care will be rendered by all physicians who provide services under the plan to their plan members at a cost that will not be a deterrent to the procurement of such care. They may justly expect that their plan will not be subject to unnecessary utilization by their plan members. Their obligation to expend funds efficiently should be recognized. They are entitled to the co-operation of the medical profession in developing and maintaining relationships which are ethical.

These third parties should hold administrative expenses to an acceptable minimum so that the highest possible percentage of their income is spent for medical care. They should make clearly known to beneficiaries the nature and extent of services or benefits which are available. The cost to members for plan participation should be made known to them by the plan. They should provide the beneficiary with the widest possible choice of physicians as stated in the paragraph entitled "Plan Members." They should refrain from interfering in patient-physician relationships and should prevent lay interference in the practice of medicine. When plans contemplate entering a community, they should give consideration to the effect a closed panel plan might have on the practice of physicians who are located there and on the effect of medical care available for the community, particularly that segment which is not affiliated with the plan. Every effort should be made by the third party to minimize any adverse effects. These third parties should seek the counsel and guidance of the medical profession in the initiation, development, and operation of plans. The cooperation of the profession should be enlisted in resolving problems and controversies which may arise.

The foregoing represent the bases upon which conclusions and recommendations have been formulated with respect to the third party in the group of Miscellaneous and Unclassified plans and its relationships with plan members and physicians. These appear in the following sections of this report.

SUMMARY OF SOME OF THE CONCLUSIONS IN THE STATEMENT OF THE COMMITTEE CONCERNING LAWS RELATING TO MISCELLANEOUS TYPE PLANS

1. As applied to the miscellaneous plans, the term "corporate practice of medicine" has been used in many different ways to describe not only prepaid plans but other arrangements by which medical service is made available to various groups by different corporations, such as corporations or-

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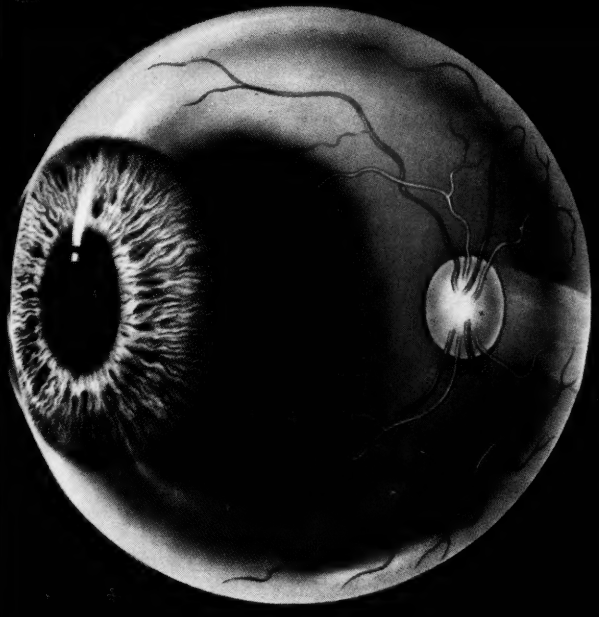

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RATIONALE

"It appears that there is now available in chlorothiazide a drug which is a specific antagonist to the abnormal sodium metabolism seen in the vast majority of hypertensive patients. The use of this agent [DIURIL] may stand the test of time as the most vital and specific weapon in the treatment of a relatively non-specific disease in which the only specific abnormality known is one of sodium metabolism. . . . Chlorothiazide now appears to be the drug of choice when initiating therapy in the average hypertensive patient."

Reinhardt, D. J.:
Delaware State Med. J. **30**:1, January 1958.

RESULTS

"We have presented a group of 48 patients previously treated with a variety of antihypertensive agents." "Upon the addition of chlorothiazide to their regimens, there was realized an additional blood pressure lowering effect of 23 mm. systolic and 11 mm. diastolic."

Bunn, W. H., Jr.:
Ohio State Med. J. **54**:1168, September 1958.

MINIMAL SIDE EFFECTS

"There is an extremely wide range between therapeutic and toxic dosage, and no significant side effects and no sensitivity to the drug as yet have been observed."

Herrmann, G. R., Hejtmancik, M. R., Graham, R. N. and Marburger, R. C.:
Texas State J. Med. **54**:639, September 1958.

dosage: one 250 mg. tablet DIURIL b.i.d. to one 500 mg. tablet DIURIL t.i.d.

supplied: 250 mg. and 500 mg. scored tablets DIURIL (Chlorothiazide) bottles of 100 and 1000.

FREE CHOICE OF PHYSICIAN AND CLOSED PANEL SYSTEMS

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ganized for profit or not for profit for that purpose, industrial organizations, fraternal groups, hospitals, co-operatives and health centers. The phrase has been used to describe arrangements in which the organization providing or agreeing to provide the service is not a corporation but, for example, a partnership, trust or association. The phrase "corporate practice of medicine" is a misnomer when used to describe a plan in which a corporation is not involved. Insofar as the phrase is used by some to imply that a particular arrangement or plan is universally illegal, it can be misleading.

2. The law applicable to the organization of miscellaneous plans varies from state to state. As a result of court decisions in some states, legislation and changes in social philosophy which have occurred in this country, miscellaneous prepaid plans, particularly closed-panel plans, can now be legally organized and operated in some states even though a corporation is involved and the plan engages in advertising. There is no constitutional provision or inexorable principle which prevents a state from authorizing a corporation, including a closed panel, to provide medical care. The question is one of state policy determined by the legislature or by the courts in construing state laws.
3. State laws do not universally prohibit a corporation from utilizing a closed panel in the operation of a prepaid plan. Unquestionably, in the absence of permissive legislation this practice in some forms is barred in some states. It is clearly lawful in other states when conducted by not for profit corporations organized under general corporation statutes or enabling legislation. Between the two extremes, in other states, these closed-panel plans are lawful in varying degrees and forms. Similar variations are found with respect to internal structure and operation. Partnerships, trusts, unincorporated associations and other devices, rather than corporations, have been used in organizing these plans, in some instances to avoid challenge under court decisions.
4. The Taft-Hartley Act has influenced the legal form of some plans in that it permits payments to be made by employers through collective bargaining to trusts established by employee representatives for the purpose of providing, or buying insurance for, medical care for the benefit of employees and dependents. The law neither prohibits nor requires medical representation on the governing board of the trust.
5. Although medical societies, like other associations, have considerable latitude with respect to membership, their control of membership is subject to important limitations. A major limitation occurs if the society's action concerning membership has an adverse effect on a business. Court decisions demonstrate that any medical society may be on dangerous ground if it denies membership to physicians, disciplines members, or threatens to do so because they render services for prepaid plans, including closed-panel plans. In certain circumstances such action might violate the Sherman Antitrust Act if interstate commerce is involved, or might violate state constitutional provisions and other laws relating to restraints of trade. Legal counsel should be consulted before action is taken which may affect a prepaid plan or physicians affiliated with it.
6. Court decisions show that conflict between some of the principles of medical ethics and some aspects of a plan's operation does not automatically justify screening applicants or disciplining members because they work for the plan. Courts have held, under the circumstances of particular cases, that societies were not justified in taking action against physicians who worked for closed-panel plans in which patients did not have free choice of physician, physicians were not compensated on a fee-for-service basis, and the plan advertised and solicited members or subscribers without misrepresentation or improper conduct.
7. These cases do not hold that these ethics or other ethics in certain circumstances do not justify action regarding membership, even though a prepaid plan may be adversely affected. Although there are no decisions under the antitrust laws involving the point, a court might well hold that false and misleading advertising and solicitation, extolling of physicians, interference by laymen in the treatment of patients, and inadequate medical care might be justification for medical society action in particular situations but the evidence would have to be clear and convincing. Whether the society's action is justified will depend on appraisal of all pertinent facts with a view to deter-

mining whether the society's action is aimed at protecting the quality of medical care, the patient-physician relationship, the standards of the profession, and the like or instead is calculated to restrain a legitimate business. Equally dangerous as exclusion from membership are any other coercive activities designed to restrain a medical care plan. The dangers of screening applicants or disciplining members in certain circumstances because they work for a closed-panel plan, should not cause a society to conclude that membership must automatically be granted to a physician simply because he works for a plan.

8. There are certain other well-recognized areas of lawful activity available. A medical society may lawfully and properly use edueation, persuasion and co-operation in an effort to eliminate the evils or dangers which a society believes exist, and activities of this nature have been utilized both at the national and local levels over many years. Competition is also available if physicians object to the manner in which a particular plan in the community is operated. They may encourage the development of plans and the expansion of coverage to meet competitive situations. A medical society and members of the medical profession may also properly present views to the legislature concerning the structure, method of operation, relationship with physicians and other facets of particular plans, for the purpose of obtaining legislation to protect the public and the profession, or for the purpose of opposing legislation deemed detrimental. However, activities, otherwise lawful, may become unlawful if they are part of a conspiracy to restrain trade. Prepaid health plans sponsored by medical societies or by groups of physicians, and perhaps physicians unaffiliated with any plan, are equally entitled to the protection of laws relating to restraints of trade and interference with business, as a result of any activities of other prepaid plans. Whether in any given locality any prepaid plan in its method of operation is or will be unlawfully restraining trade can only be determined by a careful analysis of the operations of that plan. If interstate commerce is not affected, applicable state laws will have to be considered.

D. CONCLUSIONS CONCERNING THE OBJECTIVES OF THE COMMISSION

The following conclusions relating to the broad objectives of the Commission are based on the personal observations of the members of the committee. These opinions concerning the questions posed by the Commission are necessarily based on the information available to the committee. The members of the committee believe these opinions are sustained by their individual knowledge, judgment, and experience.

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The following answers should be construed as more concise statements of the detailed listing of conclusions found in Parts A, B, and C of this section. They are to be read and considered in the light of, and in conjunction with, the more specific conclusions previously enumerated.

1. What are the effects of these plans on the quality of medical care?

Based upon its observations, the committee believes that the quality of medical care rendered to subscribers by the units visited and, within the scope of services offered, is comparable to the average level of care which members of the committee have observed in their years of medical practice.

The quality of medical care has improved for many low income groups now covered by these plans since a considerable number live under conditions that have made the procurement of medical care a difficult problem.

The lack of continuity in medical care, which occurs in varying degrees in conventional medical practice, is an ever-present problem in the provision of medical service through such plans. Fragmented care and lack of personal follow-up characterizes a number of representative plans observed in operation. It appears in varying degrees and takes different forms, depending upon the type and scope of medical services provided by the individual plan.

2. What is the effect of these plans on the quantity of medical care?

The committee believes that these plans have increased the quantity of medical care received by the segment of the population served by them. Many plans supply medical care to groups of people who would otherwise find it very difficult or inconvenient to obtain medical care, and to many people who have not been educated to seek such care.

The committee saw considerable evidence of "preventive medicine" in the way of screening programs for the early detection of syphilis, diabetes, tuberculosis, parasitic infections, cancer, and some other chronic diseases, and of educational efforts to encourage members to utilize the services available. However, the "preventive medicine" aspects of these programs, which their proponents contend are inadequately provided for by conventional medical practice, have been exaggerated by some of these plans in that such services do not prevent persons from getting sick. Also, in spite of efforts on the part of the plans to encourage beneficiaries to present themselves periodically for examination for the early diagnosis of disease, the plans are utilized, for the most part, by members for diagnosis and treatment when symptoms of illness appear.

3. Does the introduction of a third party in the patient-physician relationship tend to disturb it

and result in an inferior quality of medical care?

The introduction of a third party in the patient-physician relationship changes it but not necessarily in such a way as to result in an inferior quality of medical care. Whether or not it does depends upon (a) what relationship existed before the introduction of a third party, and (b) a balance of the advantages and disadvantages noted later.

The addition of a new and important factor to any situation changes it. Many of the people now covered by the miscellaneous and unclassified plans visited did not have a personal physician. For these groups the introduction of a third party has resulted in more and better care for the following reasons: (1) through such prepayment plans it is easier for people in these particular lower income groups to defray the cost of good medical care; (2) people largely in the lower social and educational levels either in crowded industrial areas or in remote regions where medical care was not readily available or sought are being educated to seek medical care; (3) the plans insist upon a high grade of training for those physicians providing specialist services and their work is closely and critically scrutinized.

If such plans were extended to other groups of patients, who are cared for by competently trained physicians, who can afford to pay for their medical care, and who are educated to the value of seeking it early in the course of illness, these plans would be neither desirable nor advantageous.

The introduction of a third party may then be advantageous or disadvantageous depending upon a balance which exists in any particular plan among the following factors. The main advantages are: (1) the physician is free from concern over administrative and financial considerations involved in patient care and (2) high qualifications for the performance of specialized work are required.

The disadvantages are: (1) the flexibility in meeting the patients' needs cannot be as great because of necessary rules and regulations which are inherent in the administration of these plans; (2) the ever-present possibility that arbitrary decisions might be made by lay boards and administrators which are contrary to the provision of good quality medical care; (3) the likelihood that, due to inertia, necessary changes in procedure or equipment will not be accomplished expeditiously; (4) that by the very presence of a third party the physician bears some responsibility to it as well as to the patient; hence, the physician whose income does not depend solely upon satisfying a patient's needs may not be so responsive to them; (5) if, because of the policies followed by some plans, the patient becomes aware that his physician must look to others for direction and supervision as to the scope of care to be provided and as to procedures to be followed in providing it, the physician may

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In potentially-serious infections...

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*TRADEMARK, REG. U. S. PAT. OFF.

**TRADEMARK, REG. U. S. PAT. OFF.—THE COMBINED BRAND OF CRYSTALLINE NOVOBIOCIN SODIUM

†TRADEMARK, REG. U. S. PAT. OFF.—THE COMBINED BRAND OF TETRACYCLINE

††TRADEMARK

y-
us
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Panalba

effective against more
than 30 common pathogens,
even including
resistant staphylococci.

FREE CHOICE OF PHYSICIAN AND CLOSED PANEL SYSTEMS

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lose prestige and dignity in the eyes of the patient and this may disturb the patient-physician relationship.

The patient-physician relationship need not be so disturbed if these factors are recognized, guarded against and successfully overcome.

If these plans were extended to cover a large proportion of the population so that most physicians found it mandatory to practice in them, the committee believes that many individuals with potential for making valued contributions to medicine would be deterred from entering the medical profession. It is thus likely that an ultimate adverse effect on the quality of medical care could result.

4. Will the plans encourage the corporate practice of medicine, especially by hospitals?

The committee believes that constructive comments on this subject require further elaboration of the phrase "corporate practice of medicine" for the reason that it has been used, as indicated in the section dealing with Laws Relating to Miscellaneous Type Plans, to describe various types of arrangements for medical care. In addition, the question above also is expressly applicable to hospitals as well as to arrangements concerning prepaid medical care plans. As applied to hospitals, many physicians have used the phrase "corporate practice of medicine" to refer to hospitals hiring physicians to render medical services with the hospital receiving the fees. The committee has interpreted the question, "Will the plans encourage the corporate practice of medicine, especially by hospitals?" on the assumption that the Commission would like to know whether prepaid plans studied by the committee will encourage the further development of closed panels and the use of employed physicians by plans and hospitals.

A characteristic of the prepaid direct service plans is the establishment of facilities with closed panel staffs. In some instances, plans own and operate their own hospitals. In at least one instance, the physicians are employed by the hospitals, and in others the financial arrangements are between the physicians and the plan.

If the provision of medical care by a closed panel of physicians through a third party mechanism is one form of so-called corporate practice, then the successful operation of the plans under study by the committee could well encourage the so-called corporate practice of medicine by hospitals.

5. What is the proper relationship between the medical profession and all third party mechanisms?

The medical profession should assume a judicious, tolerant, and progressive attitude toward developments in the medical care field. The need for continued experimentation is recognized, and the profession should undertake, and actively participate in, the study and development of various mechanisms for the provision of medical care of high quality.

Two basic questions that must be answered, as posed by the A.M.A. House of Delegates, are:

1. Acknowledging the importance of free choice of physician, is this concept to be considered a fundamental principle, incontrovertible, unalterable, and essential to good medical care without qualification?
2. What is or will be your attitude regarding physician participation in those systems of medical care which restrict free choice of physician?

What are *your* answers?

Be at the Annual Meeting

May 12 and 13

Rhode Island Medical Society

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*Trademark for glucosamine-potentiated tetracycline

RHODE ISLAND MEDICAL SOCIETY PHYSICIANS SERVICE

Report of the Tenth Annual Meeting of the Corporation, January 26, 1959

THE TENTH ANNUAL MEETING of the Corporation of the Rhode Island Medical Society Physicians Service was held at the Blue Cross Building, 31 Canal Street, Providence, Rhode Island, on Monday, January 26, 1959.

The meeting was called to order by the president, Charles J. Ashworth, M.D., at 8:15 P.M. Doctor Ashworth introduced the present and past nonphysician members of the Board of Directors who were present at the meeting.

The following members of the Corporation were in attendance:

Samuel Adelson, M.D.
Charles J. Ashworth, M.D.
Robert R. Baldridge, M.D.
Irving A. Beck, M.D.
Joseph A. Bliss, M.D.
J. Robert Bowen, M.D.
Alex M. Burgess, Jr., M.D.
Bertram H. Buxton, Jr., M.D.
Wilfred I. Carney, M.D.
Francis H. Chafee, M.D.
George W. Chaplin
Philomen P. Ciarla, M.D.
G. Edward Crane, M.D.
Harry E. Darrah, M.D.
Michael DiMaio, M.D.
John E. Donley, M.D.
James R. Donnelly
Robert W. Drew, M.D.
Frederick C. Eckel, M.D.
Peter Erinakes, M.D.
Charles L. Farrell, M.D.
William J. H. Fischer, Jr., M.D.
Henry F. Fletcher, M.D.
Ferdinand S. Forgiel, M.D.
Henri E. Gauthier, M.D.
J. Merrill Gibson, M.D.
John F. W. Gilman, M.D.
Seebert J. Goldowsky, M.D.
Hartford P. Gongaware, M.D.
Stanley Grzebien, M.D.
Edmund T. Hackman, M.D.
John J. Hall
John J. Halloran
John C. Ham, M.D.
Robert C. Hayes, M.D.
Albert H. Jackvony, M.D.
Alexander A. Jaworski, M.D.
Walter S. Jones, M.D.
Ernest K. Landsteiner, M.D.
Frank J. Logler, M.D.
Frank C. MacCardell, M.D.
Earl J. Mara, M.D.
James McGrath, M.D.
Edward A. McLaughlin, M.D.
Joseph G. McWilliams, M.D.
William S. Nerone, M.D.
Donald K. O'Hanian, M.D.
Thomas Perry, Jr., M.D.
Arnold Porter, M.D.
Alfred L. Potter, M.D.
William A. Reid, M.D.
Ralph D. Richardson, M.D.
Francis B. Sargent, M.D.
Carl S. Sawyer, M.D.
William J. Schwab, M.D.
John Shepard II
James J. Sheridan, M.D.
Robert D. Stuart
Saul A. Wittes, M.D.
Hrad H. Zolmian, M.D.

Also present were Stanley H. Saunders, executive director, Edgar H. Clapp, associate executive director, William E. McCabe, legal counsel, and John E. Farrell, Sc.D., executive secretary.

Address of the President

Doctor Ashworth gave his annual report on the experience of Physicians Service during the year 1958. Copy of this report is made part of the official minutes of the meeting.

Annual Report of the Secretary

Doctor Ernest K. Landsteiner, secretary of the Corporation, read his annual report, copy of which had been distributed to each member of the Corporation.

It was moved that the report be received and placed on file. The motion was seconded and adopted.

Annual Report of the Treasurer

Mr. James Donnelly, treasurer, read his report for the year 1958, copy of which is made part of the official minutes of the meeting. It was moved that the report be received and placed on file. The motion was seconded and adopted.

Report on Extended Plan

The secretary read a report from the Board of Directors on the extended benefits plan as adopted by the Board at its meeting on January 19, 1959.

Copy of the report was distributed to each member of the Corporation and copy is made part of the official minutes of this meeting.

It was moved that the report be accepted and the recommendations in it be adopted. The motion was seconded and adopted.

There was general discussion by members of the Corporation of the various recommendations in the report.

The motion was passed.

Election of Physician Members to the Board

The president noted that the House of Delegates nominates four physicians annually to serve on the Board of Directors. He also noted that the House of Delegates would meet after the meeting of the Corporation.

It was moved that the secretary be empowered to cast a vote for the Corporation to elect the physicians nominated by the House of Delegates of the Rhode Island Medical Society to serve as directors on the Board of Directors of the Rhode Island Medical Society Physicians Service. The motion was seconded and passed.

Report of the Executive Director

Mr. Stanley H. Saunders, executive director of

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Rhode Island Medical Society
Physicians Service

OFFICERS—1959

CHARLES J. ASHWORTH, M. D. . . . . *President*
EARL J. MARA, M. D. . . . . *Vice President*
CHARLES L. FARRELL, M. D. . . . . *Secretary*
JAMES R. DONNELLY . . . . . *Treasurer*

BOARD OF DIRECTORS

CHARLES J. ASHWORTH, M. D.
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GEORGE W. CHAPLIN
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FREDERICK C. ECKEL, M. D.
CHARLES L. FARRELL, M. D.
WILLIAM J. H. FISCHER, M. D.
HENRI E. GAUTHIER, M. D.
SEEBERT J. GOLDOWSKY, M. D.
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FRANK J. LOGLER, M. D.
EARL J. MARA, M. D.
WILLIAM A. REID, M. D.
FRANCIS B. SARGENT, M. D.
ORLAND F. SMITH, M. D.
ROBERT D. STUART

EXECUTIVE OFFICE: 106 Francis Street, Providence 3, R. I.
Executive Secretary: JOHN E. FARRELL, SC. D.

ADMINISTRATIVE OFFICE: 31 Canal Street, Providence 2, R. I.
Executive Director: STANLEY H. SAUNDERS

STANDING COMMITTEES

Executive Committee
CHARLES J. ASHWORTH, M. D., *Chairman*
JAMES R. DONNELLY
CHARLES L. FARRELL, M. D.
WILLIAM J. H. FISCHER, JR., M. D.
FRANCIS B. SARGENT, M. D.

Professional Advisory Committee
WILLIAM J. H. FISCHER, M. D., *Chairman*
SEEBERT J. GOLDOWSKY, M. D.
EDMUND T. HACKMAN, M. D.

Finance Committee
MR. JAMES R. DONNELLY, *Chairman*
CHELCIE C. BOSLAND, PH. D.
MR. GEORGE W. CHAPLIN

Conference Committee
HENRI E. GAUTHIER, M. D., *Chairman*
JOHN J. HALL
WILLIAM A. REID, M. D.

RHODE ISLAND MEDICAL SOCIETY PHYSICIANS SERVICE

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Physicians Service, gave an oral report citing the steady progress of the program over the ten-year period which has resulted in the enrollment of 63% of the eligible Rhode Island population. He praised the Board of Directors for its development of sound policies through the years, and he discussed various problems that had been faced during 1958 in the operation of the Plan.

Adjournment

The meeting of the Corporation was adjourned at 9:10 P.M.

Respectfully submitted,
ERNEST K. LANDSTEINER, M.D., *Secretary*

Annual Report of the Secretary

At the Annual Meeting of the Board of Directors of the Rhode Island Medical Society Physicians Service Corporation, held on February 10, 1958, the following were elected as officers:

Charles J. Ashworth, M.D. ..... *President*
Earl J. Mara, M.D. ..... *Vice-President*
Ernest K. Landsteiner, M.D. ..... *Secretary*
Mr. James R. Donnelly ..... *Treasurer*

The Board elected as its representatives of the public the following: Mr. George W. Chaplin, vice-president, Industrial National Bank; Mr. John J. Hall, director of Industrial Relations, Brown and Sharpe Manufacturing Company; Mr. Robert D. Stuart, president, Blackstone Valley Gas and Electric Company; Mr. James R. Donnelly, manager of the Pawtucket Office of the Rhode Island Hospital Trust Company; Mr. Felix A. Mirando, president of the Imperial Knife Company; and Professor Chelcie C. Bosland, of Brown University. The last two named directors were nominated by the Hospital Service Corporation of Rhode Island in accordance with the state statute.

In recognition of their long and valued service as members of the Board of Directors, the following non-physicians were elected to the Corporation during the year: Mr. John Shepard II, Mr. John J. Halloran, Mr. Walter F. Farrell, Mr. George R. Ramsbottom, and Mr. Emil E. Fachon.

During the year the Board held six meetings, and its Executive Committee three meetings. All authorized standing committees were appointed, and all were active in their assigned tasks in connection with the progress, development and management of the affairs of the Corporation.

Of major interest has been the study involved in the extension of the program to provide increased benefits, and ultimately major medical coverage. The Board has also considered provisions in supplemental contracts relative to diagnostic laboratory services, and such other problems as expansion of the direct enrollment campaign; review of legislative proposals; participating physician agreements; extension of benefits for mental, tuberculosis and other chronic illnesses; dental provisions; accident room coverage, and public information programs.

The progressive development of Physicians Service is compared in the attached summary of statistics for the years 1957 and 1958 which is made part of the report.

Respectfully submitted,
ERNEST K. LANDSTEINER, M.D., *Secretary*

Rhode Island Medical Society Physicians Service
Comparison of Statistics — Years 1957 and 1958

	1957	*1958*	*Increase or (Decrease)*
Subscribers	505,313	521,434	16,121
Number of Firms Buying Physicians Service	1,090	1,155	65
Number of Participating Physicians	915	912	(3)
Total of Claims Paid	$5,796,851	$6,254,485	$457,634
Total of Claims Paid Since Start of Plan	$26,547,374	$32,801,859	$6,254,485
Total Assets	$3,266,901	$3,676,127	$409,226
Total Income	$6,632,356	$6,795,099	$162,743
Total Reserves	$1,592,957	$1,780,064	$187,107
Operating Expenses	$335,949	$391,415	$55,466
Operating Expense—%	5.1%	5.8%	0.7%
Ratio of Claims to Income	87.4%	92.0%	4.6%
Number of Cases Paid:			
*Surgeons	79,554	84,235	4,681
*Assistants	12,934	13,026	92
*Anesthetists	26,873	28,623	1,750
Medical	13,756	15,923	2,167
X ray and E. K. G.	81,529	89,220	7,691
TOTAL	214,646	231,027	16,381
*Maternity Cases (included in above)	10,958	10,151	(807)

* * *

Report of the Treasurer

Balance Sheet as of December 31, 1958

Assets

Cash on Hand	$ 215,484.46	—	145,950.54
Accounts Receivable (Hospital Service Corp.)	615,346.28	+	42,441.83
Investments: Government Securities	2,845,296.27	+	512,734.63
TOTAL ASSETS	$3,676,127.01	+	409,225.92

Liabilities and Reserves

Accounts Payable: Surgical and Medical Services and Hospital Service Corp.	$ 614,097.66	+	133,494.50
Accrued Surgical-Medical Expense	467,737.00	+	82,490.00
Accrued for Maternity Benefits	514,543.00	—	37,908.00
Unearned Subscriptions	299,685.00	+	44,042.55
TOTAL LIABILITIES	$1,896,062.66	+	222,119.05
Reserves	1,780,064.35	+	187,106.87
TOTAL LIABILITIES AND RESERVES	$3,676,127.01	+	409,225.92

Statement of Income and Expense

INCOME			
from Subscriptions	$6,724,719.37	+	92,362.67
EXPENSES			
Surgical and Medical Claims	$5,289,978.14	+	341,491.90
X ray and E. K. G.	964,507.04	+	116,142.14
Operating Expense	391,414.99	+	55,465.23
TOTAL OPERATING EXPENSES	$6,645,900.17	+	513,099.27
Net Operating Gain	$ 78,819.20	—	420,736.60
Income from Investments	70,379.67	+	16,635.70
TOTAL NET INCOME	$ 149,198.87	—	350,356.93

Number of Subscribers increased 16,121 for a total of 521,434.

Total cases 231,027, an increase of 16,381 cases.

Respectfully submitted,
JAMES R. DONNELLY, *Treasurer*

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HOUSE OF DELEGATES
of the
RHODE ISLAND MEDICAL SOCIETY
Report of Meeting held January 26, 1959

A REGULAR MEETING of the House of Delegates of the Rhode Island Medical Society was held on Monday, January 26, 1959, at the Blue Cross Building, 31 Canal Street, Providence, Rhode Island. The meeting was held subsequent to a meeting of the Corporation of the Rhode Island Medical Society Physicians Service, and it was called to order by the president of the Society, Doctor Francis B. Sargent, at 9:25 P.M.

The following delegates answered the roll call of the secretary:

Bristol County: Robert W. Drew, M.D. *Kent County:* Peter C. Erinakes, M.D.; Edmund T. Hackman, M.D.; Donald K. O'Hanian, M.D. *Newport County:* Philomen P. Ciarla, M.D. *Pawtucket District:* Ferdinand S. Forgiel, M.D.; Robert C. Hayes, M.D.; Alexander Jaworski, M.D.; Hrad H. Zolmian, M.D. *Washington County:* Hartford P. Gongaware, M.D.; James A. McGrath, M.D. *Woonsocket District:* Joseph A. Bliss, M.D.; Saul A. Wittes, M.D. *Officers of the RIMS:* (other than delegates): Francis B. Sargent, M.D.; Samuel Adelson, M.D.; Alfred L. Potter, M.D.; Thomas Perry, Jr., M.D. *Providence Medical Association:* Robert R. Baldridge, M.D.; Irving A. Beck, M.D.; J. Robert Bowen, M.D.; Alex M. Burgess, Jr., M.D.; Bertram H. Buxton, Jr., M.D.; Wilfred I. Carney, M.D.; Francis H. Chafee, M.D.; Harry E. Darrah, M.D.; Michael DiMaio, M.D.; William J. H. Fischer, M.D.; Henry B. Fletcher, M.D.; J. Merrill Gibson, M.D.; John F. W. Gilman, M.D.; Seebert J. Goldowsky, M.D.; Stanley Grzebien, M.D.; John C. Ham, M.D.; Walter S. Jones, M.D.; Ernest K. Landsteiner, M.D.; Frank C. MacCardell, M.D.; Joseph G. McWilliams, M.D.; William S. Nerone, M.D.; Arnold Porter, M.D.; William A. Reid, M.D.; Ralph D. Richardson, M.D.; Carl S. Sawyer, M.D.; William J. Schwab, M.D.; James J. Sheridan, M.D. *Editor of R. I. Medical Journal:* John E. Donley, M.D. *Delegate to A.M.A.:* Charles J. Ashworth, M.D.

Also present were Doctor Stanley Sprague, chairman of the Society's Industrial Health Committee, and John E. Farrell, Sc.D., executive secretary.

REPORT OF THE PRESIDENT

Doctor Sargent reported that he had named Doctor Reuben C. Bates as the Society's representative on the Board of Directors of the Quality Milk Control Association, and Doctor Henry E. Utter as alternative representative.

He reported on the development of plans by the Group Professional Liability Insurance Committee for a new carrier for the Society's group plan.

REPORT OF THE SECRETARY

Doctor Thomas Perry, Jr., secretary, noted that his report had been submitted to the delegates in their handbook. There was brief discussion of several of the items in the report.

Action: It was moved that the report of the secretary be received and placed on file. The motion was seconded and adopted.

Report of the Treasurer

The president noted that the report of the treasurer had been presented in the handbook of the delegates.

Action: It was moved that the report of the treasurer be accepted and placed on file. The motion was seconded and adopted.

Nominees for Physicians Service Directors

The president called for nominees to serve for three-year terms on the Board of Directors of Physicians Service. The following physicians were placed in nomination: Doctors Charles J. Ashworth, G. Edward Crane, Seebert J. Goldowsky, Albert H. Jackvony, Francis W. Nevitt, Thomas Perry, Jr., William A. Reid, and Francis B. Sargent.

Also placed in nomination were Doctors Ernest K. Landsteiner and Harry E. Darrah, but these physicians requested that their names be withdrawn.

The motion was made and adopted that the list of nominees be closed.

On a written ballot the following received the highest votes and were declared the nominees of the House of Delegates and the elected members of the Board of Directors of Physicians Service to serve until the Annual Meeting of that Corporation

in 1962: Doctors Ashworth, Goldowsky, Reid, and Sargent.

Benevolence Fund

The president noted that the report of the trustees of the Benevolence Fund was included in the handbook.

Action: It was moved that the report be received and placed on file. The motion was seconded and adopted.

Cancer Committee

The president noted that the report of the Cancer Committee was included in the handbook.

Action: It was moved that the report be received and placed on file. The motion was seconded and adopted.

Industrial Health Committee

Doctor Stanley Sprague, chairman of the Industrial Health Committee, reviewed the report of his Committee, copy of which was submitted to each delegate in his handbook. He reported that Governor DelSesto has named a committee to study the problems of Workmen's Compensation insurance and he expressed the hope that the Medical Society might participate in this study.

Action: It was moved that the report of the Industrial Health Committee be received and placed on file. The motion was seconded and adopted.

Maternal Health

The president noted that the report of the Maternal Health Committee was included in the handbook. He also directed attention to the suggestion of the Committee that a Perinatal Mortality Committee be appointed.

Action: It was moved that the report of the Maternal Health Committee be received and placed on file and that the president be authorized to appoint a Perinatal Mortality Committee. The motion was seconded and adopted.

Mental Health

The president noted that the report of the Mental Health Committee was included in the handbook.

Action: It was moved that the report of the Mental Health Committee be received and placed on file. The motion was seconded and adopted.

Physicians on Hospital Boards of Trustees

The president stated that the handbook included information regarding physicians serving on hospital Boards of Trustees in Rhode Island and a *Pro* and *Con* discussion of the subject, *Doctors on Hospital Boards*, reprinted from the BULLETIN OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK. He stated that the material had been included purely for information purposes.

continued on next page

Miscellaneous Business

The problem of how a physician may determine a patient's income when the patient is a subscriber under Physicians Service was discussed. Members of the House requested that the president of the Society seek to explore the question whereby physicians may secure accurate information on subscribers' incomes when a doubt exists regarding the declaration by the patient.

* * *

Doctor Alexander Jaworski, of Pawtucket, spoke briefly on the subject of better relations between the Physicians Service staff and the physicians.

* * *

Doctor Robert C. Hayes, reporting for the Health Insurance Committee, stated that the Committee urged the members to support the catastrophic hospital-nurse coverage and overhead expense program sponsored for the Society by the Committee. He also reported that his Committee has planned a meeting with the State Committee of the Health Insurance Council for the discussion of mutual problems of the insurance carriers and the Medical Society.

Adjournment

The House of Delegates was declared adjourned at 10:03 P.M.

Respectfully submitted,

THOMAS PERRY, JR., M.D., *Secretary*

* * *

REPORT OF THE SECRETARY

The Council has held two meetings since the September session of the House of Delegates. Actions taken by the Council at these meetings included the following:

1. Doctor Stanley Sprague, chairman of the Committee on Industrial Health, was named the Society's delegate to the annual Congress on Industrial Health to be sponsored by the American Medical Association, and Doctor Earl F. Kelly the Society's official delegate to the Annual Congress on Medical Education and Licensure.
2. The Committee on Insurance was asked to review a proposal of the Council of the New England State Medical Societies regarding the feasibility of an investment and retirement program on a regional basis.
3. The president was authorized to name two delegates to a regional public health meeting at Worcester at which the problems of staphylococcal infections were to be discussed.
4. Doctor Richard P. Sexton, chairman of the Veterans Affairs Committee, was named the Society's delegate to a meeting called by the American Medical Association to discuss medical problems in caring for veterans.
5. The president was authorized to set a date for a special meeting of the House of Delegates to be held in December.
6. The president and other officers of the Society were established as a committee to review nominations for vacancies on the Medical Advisory Committee to the state Workmen's Compensation Commission.
7. The Executive Office was instructed to send out a committee service questionnaire to the membership of the Society.
8. Approval was given to the Insurance Committee to distribute for the Health Insurance Council a brochure relating to simplified claim forms for use by physicians.
9. The Committee on Group Professional Liability Insurance was authorized to take whatever steps necessary, with the aid of legal counsel, to effect a continuance of the Society's group program.
10. A Nominating Committee as authorized under the by-laws was appointed, consisting of Doctors Earl F. Kelly, Alfred L. Potter, Samuel Adelson, Henry E. Gauthier, and A. E. Hardy.
11. The Council went on record opposing treatment of private patients in a hospital clinic whereby the visiting physician is paid for the services rendered, and it voted that notice of this action be sent to each hospital.
12. The president was authorized to appoint a special committee to meet with committees of the Hospital Association, and the Blue Cross, to consider matters of mutual interest.
13. The appointments by the president of the Society's delegates to the annual meetings of neighboring state medical associations were approved.
14. The annual report of the treasurer was approved, and authorization made for the investment in the general investment fund of part of the surplus cash balance available at the end of 1958.
15. The reappointment of Doctor William A. Reid as liaison representative between the Society, the A.M.A. and the State's Congressional delegation was approved.
16. The secretary was instructed to notify the Governor of the State of the Society's great interest in the problems of medical care for persons over the age 65, and of its desire to participate actively in the State Conference on Aging.
17. The president was authorized to name the Society's representatives to the regional medico-legal conference to be held in Washington, D. C., March 20-21.
18. Doctor Charles J. Ashworth, president of Physicians Service, was authorized to represent the Society, also, if he attends a meeting of the Professional Relations Representatives to be held under the sponsorship of the Blue Shield Medical Care Plans in Chicago in February.
19. The Council approved of a proposal from the Committee on Scientific Work and Annual Meeting that the 1959 Interim Meeting be held early in September at a site outside Providence, if possible, but voted against the Committee's suggestion that the meeting be held on a Saturday, and expressed the opinion that a Wednesday would be preferable.
20. A report of the chairman of the Mental Health Committee on its 5th Annual Conference of Mental Health Representatives of State Medical Associations was received and recommended for publication in the RHODE ISLAND MEDICAL JOURNAL.
21. The Council rules that members of the Society who are career officers in the armed services, the Veterans Ad-

ministration of the Public Health Service, are subject to the full dues assessment annually.

22. The secretary was instructed to convey to the mayor of Providence the suggestion of the Council that the honorarium to the Charles V. Chapin orator given by the city be $200 instead of $100.

THOMAS PERRY, JR., M.D., *Secretary*

Report of the Treasurer

The complete financial report for 1958 has been reviewed by the Council and approved. It will be subject to a professional audit in the coming month. Therefore a summary report is submitted below for the information of the House of Delegates.

We have combined the total financial assets of the Society and the accumulated assets of the Medical Journal, resulting in a cash balance at the end of the year of $17,547.26, and cash accounts receivable of the Journal of $1,285.93. This sum represents an accumulation of reserves over a period of years, and therefore the Council has voted that much of it be invested in the Society's investment account for future contingencies.

The budget for the year was closely adhered to, but unexpected expenses such as representation at special national conferences, including those with government officials relating to the Medicare program, together with the continued inflation as reflected in the increased cost of utility services, postage, etc., left the Society with a net over operating costs for the year of only $616.23.

The investment account, representing general funds as well as special trusts willed to the Society, had a sizable increase in market value in 1958 due to the rise in value of the common stock portfolio.

A summary of the financial statement for 1958 is as follows:

Cash balance, Checking Account, Industrial National Bank, January 1, 1958	$ 18,183.66
Receipts, 1958 (all sources)	84,962.14
TOTAL	$103,145.80
Expenses, 1958 (Society and Journal)	84,312.61
Cash balance, January 1, 1959	$ 17,547.26
Journal accounts receivable	1,285.93
CASH ASSETS	$ 18,833.19
Investments, General and Special Funds Trust Department Industrial National Bank Market Values	62,314.00
TOTAL ASSETS	$ 81,147.19

FRANCIS V. GARSIDE, M.D., *Treasurer*

RHODE ISLAND MEDICAL SOCIETY BENEVOLENCE FUND

In 1958 the trustees of the Benevolence Fund extended financial assistance to four physicians and

continued on next page

their families, and in addition provided them with family coverages in Blue Cross and Physicians Service. In each instance the physician was disabled and unable to engage in medical practice.

During the year the Fund received a total of $2,892.00 in contributions. This sum, plus the cash reserve at the start of the year and interest, resulted in total assets of $6,107.54, from which $2,116.40 was paid out in benefits, leaving a cash balance at the start of 1959 of $3,991.14.

In June, 1958, the U. S. Treasury Department ruled the Fund exempt from tax since it is organized and operated exclusively for charitable purposes. Thus contributions to it may be deducted on personal tax returns by the donors.

The trustees acknowledge in particular the active support of the Fund by direct solicitation of members by the Providence Medical Association, the Washington County Medical Society, the Woonsocket District Medical Society, and the Women's Auxiliary of the Society.

The financial report for 1958 is as follows:

Cash balance, Savings Department, Industrial Nat'l Bank, in Providence, January 1, 1958		$3,091.24
Receipts, 1958		2,892.00
Interest on Savings Account		124.30
Total Assets		$6,107.54
Benefits paid out in 1958—Cash	$1,700.00	
Blue Cross-Physicians Service Coverage	416.40	
		2,116.40
Cash Balance, Savings Department Industrial Nat'l Bank, Jan. 1, 1959		$3,991.14

Respectively submitted,
DAVID FREEDMAN, M.D.
HENRY J. HANLEY, M.D.
GEORGE W. WATERMAN, M.D.
Trustees of the Benevolence Fund

CANCER COMMITTEE

The Cancer Committee of the Rhode Island Medical Society has arranged for the presentation of the Annual Cancer Conference, Wednesday, March 18, 1959. The program will be presented by a group from the Roswell Park Memorial Institute, Buffalo, New York, and is as follows: Doctor John Parsons: *Radiotherapy in Cancer;* Doctor John Graham: *Some Aspects of Neoplasms of the Genital Tract;* Doctor James Holland: *Cancer Chemotherapy;* Doctor James Grace: *Immunological Aspects of Cancer and Cancer of the Gastrointestinal Tract.*

HERBERT FANGER, M.D., *Chairman*

MATERNAL HEALTH COMMITTEE

On the evening of December 9, 1958, this Committee met at the home of Doctor John Walsh. The maternal deaths for the latter half of the year were reviewed, but inasmuch as two more deaths have occurred since the meeting, we will be unable at this time to give a final report of the year's mortality statistics.

In our report one year ago, mention was made of the need of a perinatal mortality committee in Rhode Island, but no definite action was taken. At this meeting, this subject was again discussed and a committee was appointed to study the possibilities of and help promote the formation of such a committee of the Rhode Island Medical Society. Doctor Bertram Buxton was appointed as chairman with Doctor William J. MacDonald, Doctor William Reid, and Doctor George W. Anderson to assist him. We are fortunate now to have with us in Rhode Island Doctor Anderson, formerly of the Johns Hopkins Hospital, who is nationally known for his studies on the subject of perinatal mortality.

Our Maternal Health Committee in the past has been chiefly concerned with the study of maternal deaths. However, in the past two decades, maternal mortality has decreased by more than 90% and many of the deaths now are due to rare and bizarre causes which are not preventable. There has not been a similar reduction of fetal or neonatal deaths during this same period, even though our improved maternal care should help reduce the perinatal mortality rate. Many cities, counties, and even some states throughout the country have had such committees functioning for several years. Ours is a small state with a concentrated population, and it should be quite easy to conduct such studies.

It is sincerely hoped that the Society will see the need of the formation of a perinatal mortality committee in Rhode Island. It would have to include pediatricians as well as obstetricians and probably others such as a pathologist and anesthetist and, therefore, should be a separate committee from the Maternal Health Committee.

STANLEY D. DAVIES, M.D., *Chairman*

MENTAL HEALTH

The Committee on Mental Health met on January 15, 1959. The principal topic on the agenda had to do with giving direction and emphasis in our thinking on the problems arising in the old age group. There is such a welter of opinions and perspectives with respect to this timely but often sentimentally approached problem. Doctor Ezra Sharp is the chairman of the Committee on Aging of the Rhode Island Medical Society. On very short notice, and with much graciousness, Doctor Sharp attended our Committee meeting. The interchange and communication was helpful.

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MENTAL HEALTH COMMITTEE

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With the objective of giving direction and emphasis to energies expended in alleviating this problem, the Committee on Mental Health would like to make the following points:

There is a natural old age. The majority of people capably meet this aspect of their total life. Disregard of this fact leads to distortion in approaching the problem. Physicians, social workers and social agencies see a disproportionately high number of older people who for various reasons are prevented from functioning in accordance with natural old age. One of the prerequisites for meeting old age naturally is an intact central nervous system. The central nervous system is the integrating and coordinating system of the body. If pathological old age has made inroads on the central nervous system then meeting old age naturally is thwarted and this thwarting is greater than when any other body system becomes pathological. It follows that a direction of effort in alleviating the old age problem is for medicine to develop the capacity to keep the central nervous system intact.

There is another point that the Committee on Mental Health would make. History tells us that different generations of people are faced with different problems. Much of the magnitude of the problem of old age has been constructed from those people born from the 1870's to the 1890's. These generations, when still young people, had a tendency to look with apprehensiveness toward the coming of old age. There have been many happenings which it is confidentially believed will result in the generations born after 1900 approaching the fact of old age quite differently. To cite just one happening: Changes in communication make it possible for the person in the old age group to continue to relate to present-day happenings with ease. Travel as a form of communication is within the realm of the older individual whereas to the generations from the 70's to the 90's a trip in a horse and buggy would have been prohibited. This tremendous change in communication enables the person with an aging body to remain in contact with the stream of living as has never previously been possible. A position by the fireside, patiently awaiting the end of his life, is not a requirement in the present-day world.

Finally the Committee would call your attention to the frequent use of the word "need" in relationship to many problems pertaining to health and welfare on today's scene. The semantics of this word should be studied.

The Committee on Mental Health emphasized these points with the intent of aiding and clarifying the thinking of the House of Delegates.

HAROLD W. WILLIAMS, M.D., *Chairman*

DISTRICT MEDICAL SOCIETY MEETING

PROVIDENCE MEDICAL ASSOCIATION

A regular meeting of the Providence Medical Association was held at the Rhode Island Medical Society Library on Monday, February 2, 1959. The meeting was called to order by the president, Doctor John C. Ham, at 8:30 P.M.

Minutes of the Previous Meeting

The minutes of the previous meeting of the Association were not read. The president noted that the minutes would be published in the RHODE ISLAND MEDICAL JOURNAL.

Communications

Doctor Michael DiMaio, secretary, read a communication from Rhode Island Hospital announcing that Doctor Chester M. Jones, Professor of Clinical Medicine, *Emeritus*, at Harvard Medical School, would serve as Physician-in-Chief *pro tempore* at the Hospital on February 16, 17 and 18.

Committee Appointments

Doctor John C. Ham read the list of appointments he had made to serve on the various committees of the Association for the year 1959.

Obituary

The president announced that on January 3 the Association had lost by death Doctor Israel Kapnick, of Providence. He stated that an expression of sympathy had been extended to Doctor Kapnik's family from the Association, and he asked that the members present at the meeting stand for a moment of prayer.

Scientific Program

The president introduced Doctor Samuel D. Clark, formerly of Bristol, Rhode Island, and now physician, Medical Department; Medical Officer, Radioactivity Center, Massachusetts Institute of Technology, Boston, Massachusetts. Doctor Clark, speaking on the subject, *The Watches That Won't Run Down*, reported on the results of investigations of victims of radium poisoning after an interval of thirty years.

During the years 1925-1927, radium workers applied radium to watch dials with a small brush. Between applications of the material, the workers would moisten the brushes with their lips and it was in this manner that they were repeatedly exposed to radium and radium poisoning.

The speaker noted that gamma radiation was not dangerous because it is not stored in the body. Alpha radiation, on the other hand, was very dangerous because it produced radiation year after year for a lifetime.

Doctor Clark pointed out that osteogenic sarcoma and carcinoma of the paranasal sinuses were commonly produced by repeated exposure to radium as described.

Adjournment

The meeting was adjourned at 9:50 P.M.

Attendance was 78.

Collation was served.

Respectfully submitted,

MICHAEL DIMAIO, M.D., *Secretary*

NECROLOGY — 1958*

JAMES H. McCOOEY, M.D., a leading citizen of Woonsocket whose medical-political career spanned half a century, died at his home on June 30, 1958, at the age of seventy-four.

Doctor McCooey was a graduate of the Baltimore College of Physicians and Surgeons (now the University of Maryland Medical School) which honored him in 1957 as a fifty-year alumnus. He passed the state examining board medical examinations in 1906 in both Rhode Island and Massachusetts, and he maintained offices for many years in Millville and Blackstone. In 1918, he opened his Woonsocket office where he practiced until his retirement in 1951.

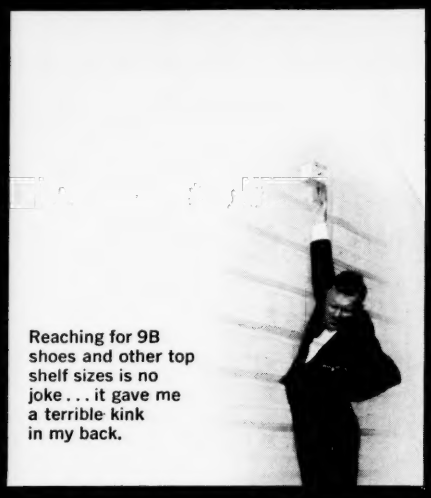
He was a past president of the Woonsocket Hospital, a past president of the Woonsocket District Medical Society, and an active member of both the Rhode Island Medical Society and the American Medical Association.

Active in politics nearly all his life, Doctor McCooey served as a selectman, as chairman of the Blackstone Valley River Authority, as administrator for the WPA and PWA, as town moderator, and as chairman of the Democratic Town committee, a post he held from 1936 until his final illness.

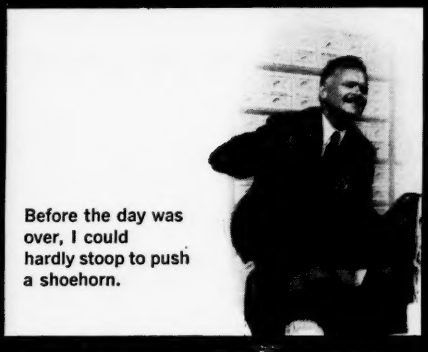
His survivors include four sons, Dr. James H. McCooey, Jr., of North Smithfield, Dr. Thomas S. McCooey, John G. McCooey, and Alfred E. McCooey, all of Blackstone; two daughters, Mrs. Ralph E. Erb of Roslyn, N. Y., and Mrs. Matthew F. Sullivan of Blackstone.

(*The Editors regret that this Necrology listing was not included in the January issue.)

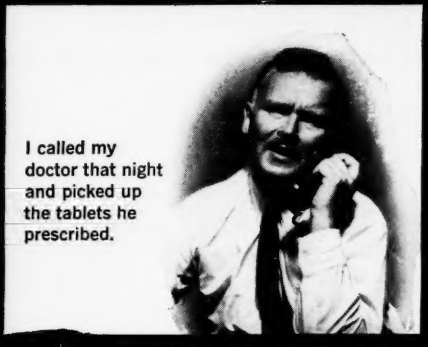
REACHING FOR THOSE 9B's NEARLY PUT ME ON THE SHELF...



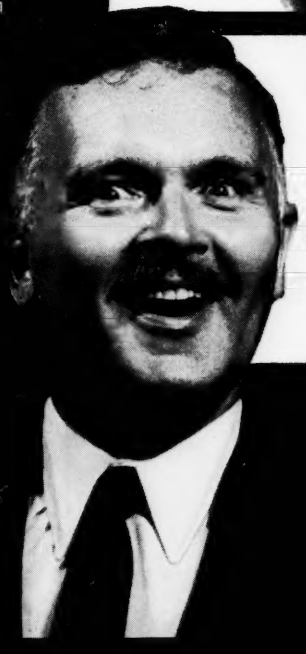
Reaching for 9B shoes and other top shelf sizes is no joke . . . it gave me a terrible kink in my back.



Before the day was over, I could hardly stoop to push a shoehorn.



I called my doctor that night and picked up the tablets he prescribed.



The pain went away fast—in just 15 minutes—and I was back on the job the next morning! But not one 9B customer came in the whole day!

Percodan®-Demi & Percodan® *Tablets*

Salts of Dihydrohydroxycodeinone and Homatropine, plus APC

FOR PAIN

ACTS FASTER — usually within 5-15 minutes. **LASTS LONGER** — usually 6 hours or more. **MORE THOROUGH RELIEF** — permits uninterrupted sleep through the night. **RARELY CONSTIPATES** — excellent for chronic or bedridden patients. **VERSATILE** — new "demi" strength permits dosage flexibility to meet each patient's specific needs. PERCODAN-DEMI provides the PERCODAN formula with one-half the amount of salts of dihydrohydroxycodeinone and homatropine.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit forming. Federal law permits oral prescription.

Each PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone hydrochloride, 0.38 mg. dihydrohydroxycodeinone terephthalate, 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. phenacetin, and 32 mg. caffeine.

AND THE PAIN WENT AWAY FAST

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*U.S. Pat. 2,628,185

THROUGH . . .  *the Microscope*

Doctor Draft Bill Extended
By House of Representatives

The House Armed Services Committee recently cleared legislation for a four-year extension of the regular draft act and with it the doctor draft, and sent the bill to the House for action. Without an extension both provisions would expire next June 20.

Under the act doctors who have obtained an educational deferment are subject to call up to age 35, whereas other registrants are free of obligation after age 26. The A.M.A. maintains that physicians should be registered and classified in the same manner, and called to duty "under the same general provisions as other registrants deferred for educational purposes."

Study to be Made of Rhode Island Facilities
for Chronically Ill and Aged

The Rhode Island Council of Community Services is to receive a $12,000 U.S. Public Health Service grant annually for three years, plus $1,800 from the Rhode Island Foundation, to test the potential of a central information, referral and consultation service to chronically ill and aging persons in the state for better use of existing services, identifying gaps in services, and designing new patterns of service.

When the project is established it will be possible for any person to obtain information by telephone on health, welfare and recreation services available to meet their needs.

****They're Stealing My Dollars, Robbing My Children, Grandchildren, and Great-Grandchildren***

Mr. Hoffman of Michigan. Mr. Speaker, my parents and my grandparents never had a dollar they did not earn through manual labor—except what the latter left to the former.

Whatever the grandparents, by practicing thrift, were able to save, they gave to my parents. My parents lived simply, frugally, and one of the principal objectives of their toil and their thrift was to give my sister and me a better start in life than they enjoyed.

The wife and I have been endeavoring, throughout our 59 years of married life, to follow along the same path. From time to time, out of my earnings as a lawyer and because of our frugal living, we were able to purchase a little life insurance, a few securities, put a little money in the bank, buy a home and a little additional real estate; but, for the last 20 years, the purchasing power of our investments — except those in real estate — has been shrinking. And the taxes on the real estate have become so high that it no longer pays its way, returns a profit. Nor has the actual purchasing value of real estate—except in development instances—increased.

The result is that, because—as the days roll by—the purchasing power of his resources is less than when he denied himself, attempted to securely invest any surplus, there is today little inducement for the average citizen to work, attempt to practice thrift, to accumulate property or a bank account.

Why Do Twenty Million Americans —
or One Out of Every Eight —
Enter a Hospital Each Year?

This is the subject of a $200,000 study just authorized by the Executive Committee of Health Information Foundation. It will be conducted jointly by the National Opinion Research Center of the University of Chicago and the Foundation.

A sample of admissions to hospitals in Massachusetts will be examined through the approval and co-operation of the Massachusetts Medical Society, the Massachusetts Hospital Association and the Blue Cross-Blue Shield Plans in that state. The two and one-half-year study will attempt to ascertain the non-medical factors and family situations which lead to hospital utilization as well as medical reasons given by physicians.

concluded on page 212

*EXTENSION OF REMARKS of CLARE E. HOFFMAN, of Michigan, in the House of Representatives, Monday, January 26, 1959.

Congressional Record, Jan. 26, 1959

provides therapeutic sulfa levels for 24 hours...

Highly soluble in acid and alkaline media... rapidly absorbed, producing fast, effective plasma-tissue concentrations sustained for the entire day. Simple, single 0.5 Gm. daily dose minimizes patient dosage confusion. At least equivalent to 4 to 6 Gms. daily of previous sulfonamides. Does not produce renal complications.[1]

with low incidence of sensitivity reactions...

KYNEX is extremely low in toxic potential.[2,3] Cutaneous or other objective sensitivity reactions are rare, as demonstrated in a large scale evaluation of clinical toxicity.[2] Also minor subjective reactions are less likely to develop when the recommended dosage is used.[2]

Dosage: Adults, 0.5 Gm. (1 tablet) daily following an initial first-day dose of 1 Gm. (2 tablets).

TABLETS, 0.5 Gm. Bottles of 24 and 100.

also available – KYNEX Acetyl Pediatric Suspension, cherry-flavored, 250 mg. sulfamethoxypyridazine activity per teaspoonful (5 cc.). Bottles of 4 and 16 fl. oz.

1. Editorial, New England J. Med. 258:48, 1958.
2. Vinnicombe, J.: Antibiotic Med & Clin. Ther. 5:474, 1958.
3. Sheth, U. K., et al.: Ibid., p. 604, 1958

for improved control
WHENEVER SULFAS ARE INDICATED

KYNEX®

Sulfamethoxypyridazine Lederle

Lederle

LEDERLE LABORATORIES
a Division of **AMERICAN CYANAMID COMPANY,** Pearl River, New York

THROUGH THE MICROSCOPE

concluded from page 208

One New Case Every Five Minutes

Tuberculosis as a cause of death has dropped from first to thirteenth place in the past half century, but one new case is reported every five minutes in the United States.

This fact is revealed in the current issue of PATTERNS OF DISEASE, prepared by Parke, Davis & Company for the medical profession.

In the past twenty years alone the number of tuberculosis deaths has dropped about 80 per cent. The number of newly reported cases, however, has declined only about 20 per cent during this period.

This publication stresses the need for more intensive drives to detect the disease. For every known case, it reports, there is one unknown tuberculous person. Total number of known and unknown cases (both active and inactive TB) in the U.S. is estimated at 800,000.

"To eradicate tuberculosis," *Patterns* points out, "the disease must be detected and treated early, while lesions are small and readily amenable to therapy." Yet, for the past five years, only about 22 per cent of newly reported active and probably active cases have been in the early stage. In 1956, about 20 per cent of persons who died of tuberculosis had not been previously reported as having the disease.

Surgeons to Hold Sectional Meeting in Montreal in April

The American College of Surgeons will hold its first Canadian four-day Sectional Meeting in Montreal, for surgeons and nurses, April 6-9. Headquarters will be the Queen Elizabeth Hotel, with many sessions scheduled at leading Montreal hospitals.

This four-day meeting, like the annual Clinical Congress, is designed to inform the medical profession at large about developments in surgery, and to focus attention on newer ways of handling problems encountered in daily practice. The program will include hospital clinics, panel discussions, symposia, scientific papers, technical exhibits, medical motion pictures and cine clinics in general surgery and the surgial specialties of anesthesiology, ophthalmic surgery, otolaryngology, urology, orthopedic surgery, and gynecology-obstetrics.

An Estimated 121 Million Americans Have Health Insurance

By the end of 1958, health insurance protected an estimated 121 million Americans against the cost of hospital and doctor bills, the Health Insurance Institute has reported in a review of the year.

The number of persons covered by health insurance through insurance company programs, Blue Cross-Blue Shield and other plans represents 70% of the population.

Reports from the 700 insurance companies handling health insurance in the U.S. disclosed substantial progress was made last year in providing sound programs for persons over age 65. Gains in coverage were also noted for the individual and family policyholder, employees of small business firms and for people living in rural areas.

Top Priority to Basic Medical Research Programs Urged

Declaring that in modern medicine it is basic knowledge that needs to be increased "as rapidly as possible," the nation's drug manufacturers recently urged the government to give top priority to basic medical research programs.

In a 1000-word Statement of Principle, the Pharmaceutical Manufacturers Association warned that the U.S. faces a 25 per cent deficit in the number of medical scientists needed by 1970. Therefore, the association said, the government must also give highest priority to programs which would lead to the training of additional teachers and researchers.

The P.M.A. said that pharmaceutical industry laboratories should not receive government subsidies except for those "exceptional cases" in which U.S. agencies cannot find a nonprofit institution capable of turning out the required research. As a matter of fact, the P.M.A. declared, research subsidies to drug firms rather than to academic institutions would probably result in further depletion of an already dwindling supply of scientists in nonprofit centers.

Acute Illnesses Highest in Youngest Age Groups

About 438 million acute illnesses involving either restricted activity or medical attention or both occurred among the American people during the year ending June 30, 1958. The number of such illnesses averaged 2.6 for every person in the population.

The figures are from the newest report of the U.S. National Health Survey, which shows also that the incidence was highest in the youngest age groups and decreased progressively in each older age group. The rates ranged from an average of 4 illnesses among children under 5 to 1.6 illnesses per person 65 or over.

The incidence rate among females was slightly higher than for males.

Respiratory ailments accounted for 65 per cent of all the illness involving medical attention or restricted activity. The respiratory illnesses caused 1,172 million days of restricted activity, or an average of 7 days per person. About half of this time involved bed disability.

The days of restricted activity included 219 million days lost from work, and 196 million days lost from school. The incidence of these illnesses reflects the impact of the Asian influenza epidemic which occurred during the year.


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BOOK REVIEWS

OUR NUCLEAR ADVENTURE: Its Possibilities and Perils by D. G. Arnott, Philosophical Library, New York, 1958.

This volume has four major divisions in which the author has tried to present the basic concepts of atomic dynamics, to consider the frightening danger of co-annihilation, to speculate on the limitless benefits to be derived from the industrial application of atomic power and thermonuclear power, and to shock the reader into awareness of his responsibilities in living with "the nucleus."

In assuming that the reader has no knowledge of atomic theory or the phenomenon of radioactivity, Mr. Arnott has been able to present a very clear and concise picture of nuclear anatomy. This groundwork gives one the courage to try to decipher some of his rather enigmatic descriptions of fission-fusion-fission bombs and nuclear reactors. In his presentation the author has oversimplified and in some cases omitted important details. Consequently, other sources are necessary for a clear understanding.

Especially interesting are his chapters on immediate and long-term fallout. He discusses many facets of the fallout problem—the experience of the Japanese following the 1954 Bikini explosion, the non-uniformity of the distribution of radioactivity due to variation of toxicity of the elements used by different nations, and the contamination of fish by sea currents originating in test areas. Although the author cites many of the benefits contingent on the control of atomic power, he does not lose sight of such problems as the storage of fissionable materials and the disposal of waste products from atomic reactions. Also of a sobering nature are the effects which Arnott feels the increased amounts of radiation will have on heredity and the more immediate dangers such as sterility, myeloid leukemia and aplastic anemia. This book has been written to reawaken "ordinary man" to the "fact" that he has alienated himself "from any semblance of control over his own destiny" and that this "is one of the great dangers of our age." This intention has certainly been achieved by the author's less than optimistic tone. Whether or not you agree with Mr. Arnott's philosophical thesis, OUR NUCLEAR ADVENTURE is for the most part interesting reading.

JOANN K. WATSON

THE DOCTOR BUSINESS by Richard Carter. Doubleday & Co., Garden City, N.Y., 1958. $4.00

This is a book that, according to its publisher "pulls back the curtain that hides the commercial side of your doctor's practice and of organized medicine in America."

Actually it is an attempt by a news reporter turned writer—to make a strong case for Closed Panel Group Practice.

Typical of news reporters, he sets up a predetermined objective and then proceeds to develop his thesis by using sundry situations, quotations, incidents and philosophies to support it.

Although the author writes interestingly enough in the first part of his book he soon lapses into dull reporting of events and ends with statistics and a list of the member clinics of Group Health Federation of America.

The shortcomings of some doctors, and the A.M.A. are emphasized. Fee-for-service is condemned as archaic. The author believes that social control is the only way to insure public health with the elimination of the fee basis to early diagnosis. He espouses a consumer-physician-government agency to "guide the choice of a physician and to supervise the cost and adequacy of services."

The author states that the responsibility for the book is his own. Nevertheless he obviously has the support and approval of Group Health Federation, inasmuch as a recent issue of their *News Letter* praised the book and promised an early review of it by Doctor James Howard Means.

I may surprise my colleagues, but I recommend this book to all doctors at the policy-making level of state and county medical societies, and urge them to read it. It is important to know what others think and say about us even if they are biased and partial.

CHARLES L. FARRELL, M.D.